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Studies and Exercises

—IN—

ECONOMICS

—BY—

L. W. PARISH, A. M.
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CEDAR FALLS, IOWA.

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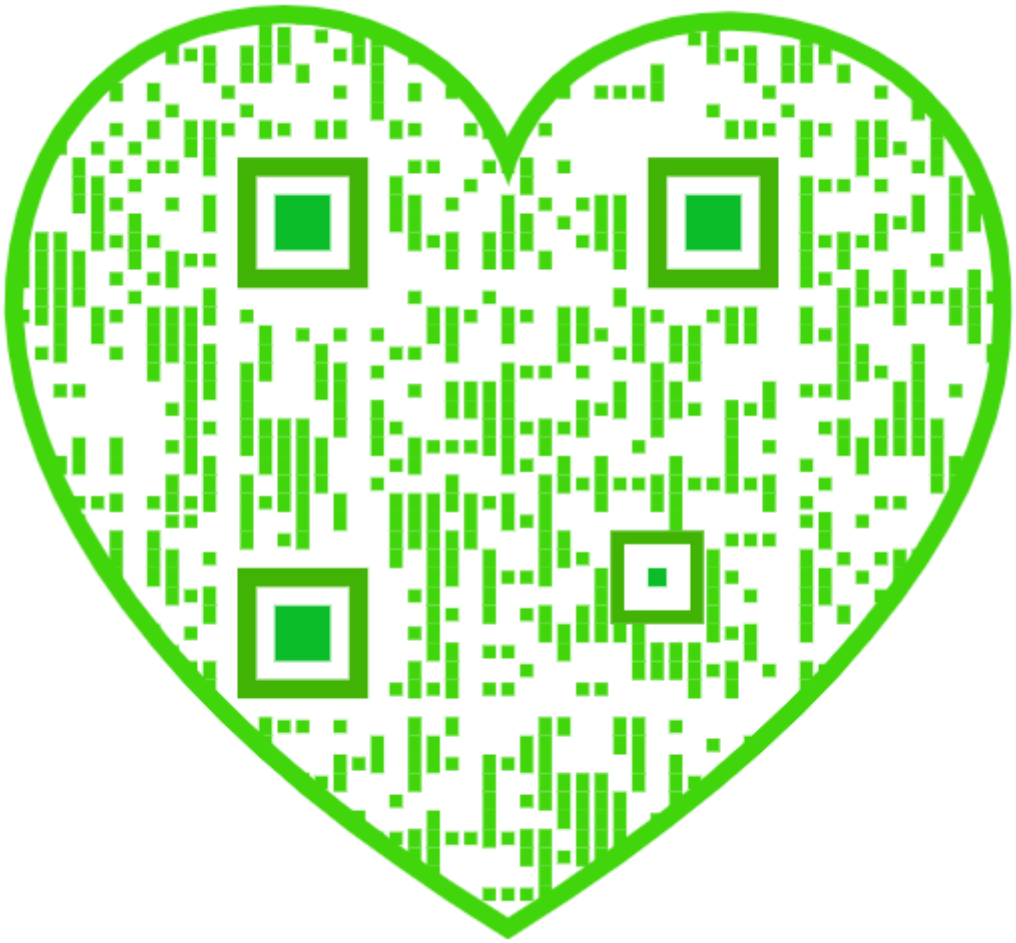
GAZETTE BOOK AND JOB PRINTING HOUSE.
1903.



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PART I.

Exchange and Money.

EXCHANGE

1. Exchange is trade. "An exchange involves, first a bargain, and secondly a double transfer of commodities. It resolves potential utilities into actual ones. It causes an article which is capable of rendering a service to actually render it to the user."[1] Sometimes the goods obtained by the exchange are not actually handed over, but ownership in them is always transferred. Exchange may, then, be described as a transfer of ownership for a consideration. The consideration may be some other commodity, money, or a claim on some one for money or commodities. The history of exchange has been the story of progress in convenient modes of this double transfer of commodities.

2. In this development we find three modes of exchange.

Exchange by 1. Barter.
2. Money.
3. Credit.

Barter is the exchange of goods for goods; it is simple or primitive Exchange. At first it occurred only when men had a surplus of one kind of goods and lacked some other. When a boy swaps a jack-knife for a bow and arrow; when Indians trade furs for rifles, they afford us examples of barter.

3. It will easily be seen that barter is full of difficulties. (*a*) If the Indian possesses furs and wants a rifle, he must find some one who possesses a rifle and wants furs, or he cannot make the trade. Dozens of people may pos-

1. Clark's Philosophy of Wealth p. 162-63.

sess the rifle but not want the furs, or want the furs without possessing the rifle. The wants and possession must coincide. To secure this double coincidence of wants and possessions is one of the chief difficulties of barter.

(*b*) Again comes the difficulty of making change. If two knives are worth one bow-and-arrow, and I wish only one knife, how shall we make the change?

(*c*) Still again, we know that two knives are worth one bow-and-arrow, three knives are worth two blankets and seven blankets are worth one gun. I am skilled in making bows and arrows, and I want a gun; how shall I know the value of a gun in bows and arrows? It is like comparing the fractions $\frac{3}{4}$, $\frac{7}{9}$, and $\frac{4}{5}$, where we reduce to a common denominator. So in the trade we have to solve rather a troublesome problem. If people would only express the value of blankets, guns, knives, etc., in one thing (a common denominator of values) say in bows and arrows, all would be well.

4. The need of something to provide for

(1.) The double coincidence of wants and possessions,

(2.) The awkwardness of making change,

(3.) The common denominator of values,

gave rise to the early experiments in what has been called the medium of exchange and the measure of values, viz: money.

In early stages of trade, many different substances were used as money, viz; wheat, oxen, tobacco, wampum, cubes of pressed tea, etc. In the colonial days in Virginia, tobacco was the common medium of exchange; while in New England the Indian money "wampum" was used to a great extent in local trade. The Latin word *pecunia*, which stood for wealth and was derived from *pecus*, a flock or herd of

animals, the Russian work *kung* which stands for both fur and money, and the German *geld*, gold, all indicate the substances used for money by these peoples at certain stages in their economic growth. The introduction of metal money has been gradual and, with the development of civilization, the precious metals, gold and silver have come to be the favorite materials used for this purpose. Coin money became somewhat common in England during the ninth century; previous to which time, the time of King Alfred (870-901 A. D.) a large proportion, though not the whole, of English internal trade was carried on by barter. [1]

5. Credit has been defined as protracted exchange, [2] inasmuch as the trade is not completed until the credit paper is redeemed or the book-account settled. In one sense barter alone is a direct exchange; where money or credit are used they are merely a means to the real end, viz: the goods bought with them for final consumption. For instance, I sell a horse for fifty dollars, not because I wish the money itself, but because I can with it secure the consumption goods which I really desire. As John Stuart Mill has said: "Money satisfies no want; its worth to anyone consists in its being in a convenient shape in which to receive his incomings of all sorts, which incomings he afterwards converts into the forms in which they can be useful to him," [3] Credit is said to have two forms, book accounts and credit paper. With the former most people are well acquainted through their dealings with the butcher, the grocer and the book store. Credit paper includes all kinds of written agreements to pay anything for value received, and its worth in exchange depends entirely on the probability of its being redeemed.

1. Gibbins' Industrial History of England p 4.
2. H. J. Davenport's Elementary Economics p 141.
3. J. S. Mill's Political Economy Vol. 1 p 23.

6. The Essential characteristics of money are:
   (1) Intrinsic (?) value.
   (2) Indestructibility.
   (3) Divisibility.
   (4) Convenient bulk.
   (5) Steadiness of value.

With these essentials as a basis, test the desirability of the following articles for use as money; wheat, cubes of tea, tobacco, oxen; rice, wampum, paper money, copper, iron, silver, gold.

7. Intrinsic value, strictly speaking, is an impossibility, since value depends on the changing desires of human being and the fluctuating quantity of the goods. Still some things are practically always acceptable in civilized communities, and a man with gold in his pocket can nearly always secure, in exchange for it, such goods as he desires. Is this equally true of all the materials that have been used as money?

8. Money should be durable and not easily destroyed. Its perishable nature is one of the bad characteristics of paper money. Wheat had many good points, but was subject to damage by decay and by rats and other vermin. Oxen and other cattle deteriorated in value through underfeeding or disease; and gold money, with all its advantages is easily worn down by usage until its purchasing power is seriously reduced, and it must be returned to the mints and be melted and recoined.

9. The divisibility of the material of which money is made, secures to us the advantage of small change, and the consequent ability to pay precisely the price asked by the market for the goods we wish. A man rich in oxen would, perhaps, have much difficulty in buying (except on credit) articles of small valne.

10. Convenience of bulk really requires three kinds of money if not four, viz: gold and paper money for large purchases; silver for smaller purchases (for which reason it is often called the poor man's money) and nickel or copper for making exact change.

11. Steadiness of value is an important quality in money. Without it wages, salaries, and prices of commodities generally would require frequent changing to fit the varying value of the medium of exchange. The very uncertain value of paper money in the days of "wild cat" banking was extremely annoying, and sometimes quite disastrous to traders passing from one community or State to another.

12. We find that money has four functions, (1) facilitating exchange, (2) serving as a measure of values, (3) affording a standard for deferred payments, and (4) acting as a storage of value.[1] The first two are familiar to all in our everyday business. The fourth is experienced by those who save money for the future enjoyment of the goods it will purchase. The subject of deferred payments will be considered in another place. (§14)

13. "Money is best defined as a thing which, by common consent of the business community, is used as the basis of commercial obligations."[2] Mr. Walker says: "That which does the money work is the money thing."[3] Other and more elaborate definitions have been given; but these two with the old definition implied in section 4 will suffice for our present use.

1. Ely's Outlines of Economics p 141, and Davenport's Elementary Economics, p 142.
2. Hadley's Economics, p 180.
3. Walker's Advanced Political Economy, p 123.

14 It will readily be seen that variation in the purchasing power of money is a great inconvenience, and may prove even disastrous. If you lend five hundred dollars, and by the time the note is due, prices have risen so that you can purchase only half or or three-fourths as much with the five hundred dollars as you could when you lent it, you feel that you are not getting an equivalent. On the other hand, if your debtor finds prices so low that he must raise twice as much grain as before in order to pay the debt, he feels aggrieved. This, indeed, was the complaint of the farmers during the free silver campaign of 1896, and it was an argument which appealed very strongly to this class of voters. It is evident that a rise in the value of money results in a disadvantage to debtors and a fall in its purchasing power is equally injurious to the creditors. All kinds of money are more or less variable in their purchasing power, and it has been proposed that debts be settled on the basis of the ratios of prices at different times.

15. The plan is called, a Tabular Standard for Deferred Payments and its nature may be better understood by a study of the following table and exercise:

QUESTIONS ON TABLE.

1. Is a man's prosperity to be measured by the money he has or by the goods he is able to enjoy?
2. Supposing the fifteen articles in the Tabular Standard fairly to represent the necessaries and comforts of life, would a man be better off on the same salary in 1875 or in 1881?
3. How much money in 1882 was an equivalent for $800 in 1873?

Tabular Standard for Deferred Payments.

List of 15 articles bought and sold by farmers with average prices for each year from 1873-1882. (Taken from tables pages 458-459, U. S. Coinage Laws.)

	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882
1. Cotton, per lb.....	.188	.154	.150	.129	.118	.111	.099	.115	.114	.114
2. Corn, per bu.....	.61	.71	.84	.67	.58	.56	.47	.54	.55	.66
3. Wheat, " "	1.31	1.430	1.12	1.24	1.17	1.34	1.07	1.25	1.11	1.19
4. Bacon &c., per lb.....	.088	.096	.114	.121	.108	.087	.069	.067	.082	.099
5. Lard, " "	.092	.094	.138	.133	.109	088	.070	.074	.093	.116
6. Beef, " "	.077	.082	.087	.087	075	.077	.063	.064	.065	.085
7. Butter, " "	.211	.250	.237	.239	.206	.180	.142	.171	.198	.193
8. Sugar, " "	.116	.105	.108	.107	.116	.102	.085	.090	.092	.097
9. Cut Nails, " "	.049	.039	.034	.029	.025	.023	.026	.036	.030	.034
10. Rio Coffee, " "	.180	.200	.180	.170	.200	.170	.140	.150	.130	.100
11. Tea, " "	950	1.00	.600	.550	.550	.450	.400	.400	.350	.350
12. Sheeting, per yd	.133	.114	.104	.088	.084	.078	.079	.085	.085	.084
13. Standard prints, " " ...	113	.097	.087	.070	.067	.060	.062	.074	.070	.065
14. Carpets, ingrain, " " ..	1.140	1.020	.920	.820	.810	.750	.670	.850	.750	.780
15. Quinine, per oz.....	2.650	2.500	2.250	2.000	3.000	3.500	3.600	3.000	3.600	2.450
Totals.....	7.905	7.891	6.969	6.453	7.218	7.576	7.045	6.966	7.319	6.417

N. B —If a list of commodities like the above is sufficiently large and well chosen, the totals will indicate the relative cost of living for each year

4. If my salary in 1874 was $1600, and in 1879 it was reduced to $1500, was my salary increased or diminished, and how much?
5. Nominal wages of certain laborers were $2.50 in 1878, and in 1879 they were $2 35 were the real wages higher or lower?
6. My salary in 1873 was $1500; in 1840 it was $1400; was the salary really larger or smaller, considering the expense of living? What was the per cent. of difference?
7. If I received $500 worth of goods in 1878, at what cost could I purchase a similar quantity of goods to pay the debt in 1881?
8. If I borrowed $2000 in 1876, what amount of money would settle the debt with justice to both parties in 1881?
9. Borrowed $5000 in 1875; by the Tabular Standard, what should I pay to satisfy the claim in 1878, no consideration being taken of interest?
10. *Boston, Mass., June 1, 1879.*

Three years from date, without grace, I promise to pay John Doe, or order, the tabular equivalent of $1000, with interest at 7 per cent, payable annually by the same tabular standard of equivalence. Value received.

JOHN ROE.

Estimate the interest for each year and the final value of the principal June 1. 1902.

16. The term money is used at different times in different senses, which gives rise to confusion in the everyday discussions of the money question. Statements which are true under one conception are not necessarily true under another. The three uses of the word are (1) the popular. (2) the legal, (3) and the economic.

17. Currency is the proper term for money in the popular use of the word, and it stands for whatever passes freely from hand to hand as a medium of exchange, and is generally accepted in final discharge of debts." [1] This corresponds closely with the broad definition of money as quoted from Prof. Hadley in section 13.

18. What the law declares a legal tender is money in the legal sense. A legal tender is that which the law compels persons to receive in payment of debt.

19. Economic money must have a market value as a commodity, equal to its face value as coin, and it must perform all the functions of money as mentioned in section 12.

20. Money is often spoken of as coin or metal money and paper money. The coins of the United States are of three kinds, gold, silver and copper or nickel. The silver coins of less value than one dollar are called subsidiary coins; and the copper and nickel pieces are called minor coins. Under a subsequent section we shall consider the legal tender value of each.

21. There has been for some time a discussion as to whether money should be made of one metal, gold, or whether both gold and silver should be coined as money at a fixed ratio of values. The bi-metallists claim that by legally fixing the value of gold at 16 to 1, sixteen ounces of silver being equal to one of gold, and making the silver coins sixteen times as heavy as the gold coins of the same value, a constant ratio can be maintained between these metals and many great advantages will follow. The mono-metallists claim that value is a matter of supply and demand and cannot be determined by the government.

1. Ely's Outlines of Economics p. 140.

22. They quote Gresham's Law, that the poor money drives the good money out of circulation, and show by history that this has always been true, and therefore that we should use only one metal, gold, for money, and make all our silver money, like the English silver money, receivable in payment of debts only in limited amounts. The question is too large for discussion here, but a table of American coinage will be given and an exercise on the same to bring out the leading facts of the coinage laws of the United States.

23. As a result of investigation and recommendations by Robert Morris, Thomas Jefferson and Alexander Hamilton, resolutions were passed by the Continental Congress in 1785 and 1786 which led to the coinage laws of 1792. The changes in the coinage of the United States since then are recorded in the following table:

QUESTIONS ON TABLE OF COINAGE LAWS.

GOLD COINS.

24. Answer the following questions by study of the table on page 15

1. Can you gather, from the above table and your general information, in what denominations gold has been coined in this country?
2. Which of these were authorized by the act of 1792?
3. When was the gold dollar first authorized?
4. When was it abolished?
5. Answer the same questions concerning the three dollar gold piece.

Table of United States Coinage.

Showing Weight, Purity, Legal Tender, &c., Compiled by L. W. Parish, M. A.

COINS.	DATE.	GRAINS PURE METAL.	GRAINS STAN'RD METAL.	FINENESS OF METAL.	RATIO OF SILVER TO GOLD. MONEY.	MARKET.	LEGAL TENDER LIMIT.
Gold Eagles.	1792	247.5	270.	11-12	15:1	15.17:1	None.
	1834	232.	258.	.899225	16 002:1	15.73:1	
	1837	232.2	258.	.900	15 988:1	15.83:1	
Silver Dollars (Standard) Not coined from '73-'78.	1792	371.25	416.	.8924			None.
	1837	371.25	412.5	.900			"
	1873					15 92:1	"
	1874				15.988:1	16.17:1	Five Dollars
	1878	371.25	412.5	.900	15 988:1	17 94:1	Gold Clause
	1893	371 25	412 5	.900	15 988:1	26.49:1	"
Subsidiary Silver One Dollar's worth of Fractional Silver contained	1792	371.25	416.	.8924			No Limit
	1837	371.25	412.5	.900			No Limit
	1853	345.60	384.0	.900		15.13:1	Five Dollars
	1873	347.22	385.8	.900		15 92:1	Five Dollars
	1879	347.22	385.8	.900		18.40:1	Ten Dollars
	1894					32.56:1	"
	1849	Authorized Coinage of gold dollars and double eagles, Coinage Laws, p 27					
	1853	Authorized coinage of three dollar gold piece " " 29					
	1890	The gold dollar and three dollar gold piece abolished. " " 38					
	1873	Trade dollar (420 gr) legal tender for $5 from 1873-1876. " " 32					

The above statistics are gathered from "Coinage Laws of the United States," published by order of the enate in 1894. Extracts from the same, covering the points in the table, are given in this text.

6. When was the double eagle authorized?
7. Is it still coined?
8. When was the trade dollar authorized?
9. In what quantities and for what period was it a legal tender?
10. What was the ratio of pure gold to alloy in the first coins?
11. When was the first change in the gold coinage made?
12. Did it increase or diminish the amount of gold in the pieces?
13. Did it make the *fineness* of the metal greater or less?
14. When was the next change made in the gold coin, and what was its nature?
15. What was the real object of so slight a change?
16. What was the ratio of pure gold to alloy by the law of 1837?
17. Has it ever been changed?

SILVER COINS.

18. When was the first change made in the silver money of the United States?
19. Did it effect the amount of pure silver in a dollar?
20. What was the full weight of the dollar by the law of 1792?
21. What has it been since 1837?
22. How much pure silver was there in the original silver dollar?
23. Has this amount ever been changed?
24. What do you understand by subsidiary silver?

25. Did two half dollars, or four quarter dollars have as much pure silver in them as a dollar by the law of 1792?
26. Did the law of 1837 change the condition?
27. When was the relative amount of silver in the subsidiary coins reduced?
28. Can you think of a reason for this? See questions 43-52.
29. At what dates have changes been made in the fineness of metal in the subsidiary coins?
30. At what dates has the *amount of pure silver* in the subsidiary coins been changed?
31. Has this ever been done without altering ratio of silver to alloy?
32. What is the present ratio of silver to alloy in subsidiary coins?
33. What do you understand by "minor coins?"
34. If a man owed $1000 in 1792 could he require his creditor to receive 100 gold eagles in payment of the debt?
35. What limit was placed on the amount of a debt that could be paid in gold?
36. Has this ever been changed?
37. Was there any limit to the amount of silver money that a creditor must receive in payment of a debt by the law of 1792?
38. Were subsidiary (fractional) silver coins legal tender for *all amounts* by the law of 1792?[1]
39. Trace, by dates and nature of the changes in "*legal tender*" quality, the history of the standard silver dollar.
40. What do you understand by the "gold clause?[2]

1. See Coin age Law of 1792, Sec. 16 p. 24
2. See Coinage Law of 1878, Sec. 1, p. 34

41. Trace the history of subsidiary silver in regard to its *legal tender* quality.
42. How many *silver dollars* was a *gold eagle* worth in 1792, viewing both as money?
43. How many silver dollars (sold by weight) could you buy in the market for one eagle?
44. Was gold worth more in the market or as money at that time?
45. How then would it be used?
46. With what money would purchases be made?
47. Would silver be melted and sold as bullion under these circumstances?
48. How long did this state of things continue?
49. What kind of money was the practical *measure* of values from 1792 to 1834?
50. Which had the greatest market value for the same face value after 1834, at least for a number of years?
51. How long did this continue?
52. What kind of money was the practical measure of values during this time, at least till the war of 1861?
53. What money was the every-day measure of values for a number of years after the beginning of the war of the Rebellion?
54. How do you account for this?
55. How large a debt can you pay with silver dollars to day—provided you have the dollars?
56. How large a debt can you pay in gold?
57. How large a debt can you pay in halves, quarters and ten cent pieces?
58. Can you require your creditor to receive "trade dollars" in payment of a debt?

59. As bullion, which is the more valuable, a standard dollar or a trade dollar? Why?

60. In what year was the standard silver dollar demonetized? See definition of *demonetize*, and then read the Law of 1873, Sec. 15, See p. 31.

61. What was the effect, on the standard dollar, of the Law of 1874, Sec. 3586? See p. 33.

62. When and how was this effect removed? See the Law of 1878, Sec. 1, p. 34.

63. Find the value of a silver dollar in gold for each of the years mentioned in the Table.

64. Find the value of a gold dollar in silver for each of the years in the Table.

25. The political money or paper money issued by the government at present comprises

1. United States Treasury notes (Greenbacks) which are promises to pay, and are legal tender for all debts public and private except duties and interest on the public debt. They are credit paper
2. United States notes issued under the Law of 1890 which are legal tender for all debts public and private except as indicated in section 3588 of the Rev. Stat. Sec. 2 of Law of 1890.[1]
3. Silver and Gold certificates which are certificates of deposit of so much silver or gold in the U. S. Treasury. They are not legal tender but are receivable in payment of government dues of all kinds.

National Bank notes are not strictly U. S. money. They are the promissory notes of the National

1. See Extract from Coinage Laws, p 37

Banks and are secured by the deposit of U. S. bonds in the U. S. Treasury

Exercise.—Study each kind of coin money and each kind of paper money and decide under which conception of money each should be placed.

COMMERCIAL VALUE OF A SILVER DOLLAR AT VARIOUS QUOTATIONS.

Price of Silver Per Fine Ounce.	*Value of the Pure Silver in a Silver Dollar.*	*Price of Silver Per Fine Ounce.*	*Value of the Pure Silver in a Silver Dollar.*	*Price of Silver Per Fine Ounce.*	*Value of the Pure Silver in a Silver Dollar.*	*Price of Silver Per Fine Ounce.*	*Value of the Pure Silver in a Silver Dollar.*	*Price of Silver Per Fine Ounce.*	*Value of the Pure Silver in a Silver Dollar.*
$ .50	$ .387	$ .68	$ .526	$ .86	$ .665	$1.04	$ .804	$1.22	$ .944
.51	.394	.69	.534	.87	.673	1.05	.812	1.23	.951
.52	.402	.70	.541	.88	.681	1.06	.820	1.24	.959
.53	.410	.71	.549	.89	.688	1.07	.828	1.25	.967
.54	.418	.72	.557	.90	.696	1.08	.835	1.26	.975
.55	.425	.73	.565	.91	.704	1.09	.843	1.27	.982
.56	.433	.74	.572	.92	.712	1.10	.851	1.28	.990
.57	.441	.75	.580	.93	.719	1.11	.859	1.29	.998
.58	.449	.76	.588	.94	.727	1.12	.866	1.2929	1.000
.59	.456	.77	.596	.95	.735	1.13	.874		
.60	.464	.78	.603	.96	.742	1.14	.882		
.61	.472	.79	.611	.97	.750	1.15	.889		
.62	.480	.80	.619	.98	.758	1.16	.897		
.63	.487	.81	.626	.99	.766	1.17	.905		
.64	.495	.82	.634	1.00	.773	1.18	.913		
.65	.503	.83	.642	1.01	.781	1.19	.920		
.66	.510	.84	.650	1.02	.789	1.20	.928		
.67	.518	.85	.657	1.03	.797	1.21	.936		

The teacher should make problems in the value of cubes of silver and gold, based on the data in this table and the specific gravities of the metals.

N B. Remember the uses of avoirdupois and Troy weights.

COMMERCIAL RATIO OF SILVER TO GOLD.

From Coinage Laws of the United States, p. 108.

Year	*Ratio*	Year	*Ratio*	Year	*Ratio*	Year	*Ratio*	Year	*Ratio*	Year	*Ratio*	Year	*Ratio*	Year	*Ratio*
1492	10 75	1714	15 13	1742	14 85	1770	14 62	1798	15 59	1826	15 76	1854	15 33	1882	18 19
1687	14 94	1715	15 11	1743	14 85	1771	14 66	1799	15 74	1827	15 74	1855	15 38	1883	18 64
1688	14 94	1716	15 09	1744	14 87	1772	14 52	1800	15 68	1828	15 78	1856	15 38	1884	18 57
1689	15 02	1717	15 13	1745	14 98	1773	14 62	1801	15 46	1829	15 78	1857	15 27	1885	19 41
1690	15 02	1718	15 11	1746	15 13	1774	14 62	1802	15 26	1830	15 82	1858	15 38	1886	20 71
1691	14 98	1719	15 09	1747	15 26	1775	14 72	1803	15 41	1831	15 72	1859	15 19	1887	21 13
1692	14 92	1720	15 04	1748	15 11	1776	14 55	1804	15 41	1832	15 73	1860	15 29	1888	21 99
1693	14 83	1721	15 05	1749	14 80	1777	14 54	1805	15 79	1833	15 93	1861	15 50	1889	22 10
1694	14 87	1722	15 17	1750	14 55	1778	14 68	1806	15 52	1834	15 73	1862	15 35	1890	19 76
1695	15 02	1723	15 20	1751	14 39	1779	14 80	1807	15 43	1835	15 80	1863	15 37	1891	20 92
1696	15 00	1724	15 11	1752	14 54	1780	14 72	1808	16 08	1836	15 72	1864	15 37	1892	23 72
1697	15 20	1725	15 11	1753	14 54	1781	14 78	1809	15 96	1837	15 83	1865	15 44	1893	26 49
1698	15 07	1726	15 15	1754	14 48	1782	14 42	1810	15 77	1838	15 85	1866	15 43	1894	32 56
1699	14 94	1727	15 24	1755	14 68	1783	14 48	1811	15 53	1839	15 62	1867	15 57	1895	31 60
1700	14 81	1728	15 11	1756	14 94	1784	14 70	1812	16 11	1840	15 62	1868	15 59	1896	30 66
1701	15 07	1729	14 92	1757	14 87	1785	14 92	1813	16 25	1841	15 70	1869	15 60	1897	34 28
1702	15 52	1730	14 81	1758	14 85	1786	14 96	1814	15 04	1842	15 87	1870	15 57	1898	35 03
1703	15 17	1731	14 94	1759	14 15	1787	14 92	1815	15 26	1843	15 93	1871	15 57	1899	34 36
1704	15 22	1732	15 09	1760	14 14	1788	14 65	1816	15 28	1844	15 85	1872	15 63	1900	33 33
1705	15 11	1733	15 18	1761	14 54	1789	14 75	1817	15 11	1845	15 92	1873	15 92		
1706	15 27	1734	15 39	1762	15 27	1790	15 04	1818	15 35	1846	15 90	1874	16 17		
1707	15 44	1735	15 41	1763	14 99	1791	15 05	1819	15 33	1847	15 80	1875	16 59		
1708	15 41	1736	15 18	1764	14 70	1792	15 17	1820	15 62	1848	15 85	1876	17 88		
1709	15 31	1737	15 02	1765	14 83	1793	15 00	1821	15 95	1849	15 78	1877	17 22		
1710	15 22	1738	14 91	1766	14 80	1794	15 37	1822	15 80	1850	15 70	1878	17 94		
1711	15 29	1739	14 91	1767	14 85	1795	15 55	1823	15 84	1851	15 46	1879	18 40		
1712	15 31	1740	14 94	1768	14 80	1796	15 65	1824	15 82	1852	15 59	1880	18 05		
1713	15 24	1741	14 92	1769	14 72	1797	15 41	1825	15 70	1853	15 33	1881	18 16		

NOTE—Draw curves on cross-section paper, showing rise and fall in value of silver for a series of years.

THE FIRST COINAGE ACT.

1791-92, Chap. XVI. An act establishing a mint, and regulating the coins of the United States.

SEC. 9. And be it further enacted, That there shall be from time to time struck and coined at the said mint, coins of gold, silver, and copper, of the following denominations, values, and descriptions, viz: Eagles—each to be of the value of ten dollars or units, and to contain two hundred and forty-seven grains and four-eighth of a grain of pure, or two hundred and seventy grains of standard gold. Half Eagles—each to be of the value of five dollars, and to contain one hundred and twenty three grains and six eighths of a grain of pure, or one hundred and thirty five grains of standard gold. Quarter Eagles—each to be of the value of two dollars and a half dollar, and to contain sixty one grains and seven eighths of a grain pure, or sixty seven grains and four eighths of a grain standard gold. Dollars or Units—each to be of the value of a Spanish milled dollar, as the same is now current, and to contain three hundred and seventy-one grains and four-sixteenths parts of a grain of pure, or four hundred and sixteen grains of standard silver. Half Dollars—each to be of half the value of the dollar or unit, and to contain one hundred eighty five grains and ten sixteenth parts of a grain of pure, or two hundred and eight grains of standard silver. Quarter Dollars—each to be one fourth the value of the dollar or unit and to contain ninety two grains and thirteen sixteenth parts of a grain of pure, or one hundred and four grains of standard silver. Dimes—each to be of the value of one tenth of a dollar or unit, and to contain thirty seven grains and two sixteenth parts of a grain of pure, or forty one grains and three fifth parts of a grain of standard silver. Half Dimes—each to

be of the value of one twentieth of a dollar, and to contain eighteen grains and nine sixteenth parts of a grain of pure, or twenty grains and four fifth parts of a grain of standard silver. Cents—each to be of the value of the one hundredth part of a dollar, and to contain eleven penny-weights of copper. Half Cent—each to be of the value of half a cent, and to contain five penny-weights and half a pennyweight of copper.

Sec. 11. And be it further enacted, That the *proportional value* of gold to silver in all coins which shall by law be current as money within the United States, shall be as *fifteen to one*, according to quantity in weight, of pure gold or pure silver; that is to say, every fifteen pounds weight of pure silver shall be of equal value in all payments, with one pound weight of pure gold, and so in proportion as to any greater or less quantities of the respective metals.

Sec. 12. And be it further enacted, That the standard for all gold coins for the United States shall be eleven parts fine to one part alloy; and accordingly that eleven parts in twelve in the entire weight of each of the said coins shall consist of pure gold, and the remaining one-twelfth part of alloy; and the said alloy shall be composed of silver and copper, in such proportions not exceeding one-half silver as shall be found convenient; to be regulated by the director of the mint, for the time being, with the approbation of the President of the United States, until further provision shall be made by law. * * * * *

Sec. 13. And be it further enacted, That the standard of all silver coins of the United States, shall be one thousand, four hundred and eighty-five parts fine to one hundred and seventy-nine parts alloy; and accordingly that one thousand

four hundred and eighty-five parts in one thousand, six hundred and sixty-four parts of the entire weight of each of said coins shall consist of pure silver, and the remaining one hundred and seventy-nine parts of alloy; which alloy shall be wholly of copper.

Sec. 14. And be it further enacted, That it shall be lawful for any person or persons to bring to the said mint gold and silver bullion, in order to their being coined; and that the bullion so brought shall be there assayed and coined as speedily as may be after the receipt thereof, and that *free of expense to the person or persons by whom the same shall have been brought.* And as soon as the said bullion shall have been coined, the person or persons by whom the same shall have been delivered, shall upon demand receive in lieu thereof coins of the same species of bullion which shall have been so delivered, weight for weight, of the pure gold or pure silver therein contained; provided nevertheless, that it shall be at the mutual option of the party or parties bringing such bullion, and of the direction of said mint, to make an immediate exchange of coin for standard bullion, with a deduction of one-half per cent. from the weight of the pure gold, or pure silver contained in the said bullion, as an indemnification to the mint for the time which will necessarily be required for coining the said bullion, and for the advance which shall have been so made in coins. * *

Sec. 16. And be it further enacted, that the gold and silver coins which shall have been struck at, and issued from the said mint, *shall be a lawful tender in all payments whatsoever, those of full weight according to the respective values hereinbefore declared and those of less than full weight at values proportional to their respective weights.*

Sec. 20. And be it further enacted, That the money of account of the United States shall be expressed in dollars or unites, dismes or tenths, cents or hundredths, and mills or thousandths, a disme being a tenth part of a dollar, a cent the hundredth part of a dollar, a mille the thousandth part of a dollar, and that all accounts in public offices, and all proceedings in the courts of the United States shall be kept and had in conformity to this regulation.

THE LAW OF 1833.

1833-34. Chap. xcv. An act concerning the gold coins of the United States, and for other purposes.

Be it enacted, That the gold coins of the United States shall contain the following quantities of metal that is to say; *each eagle shall contain 232 grains of pure gold, and 258 grains of standard gold;* each half eagle 116 grains of pure gold, and 129 grains of standard gold; each quarter eagle shall contain 58 grains of pure gold, and 64½ grains of standard gold; every such eagle shall be of the value of $10; every such half eagle shall be of the value of $5; and every such quarter eagle shall be of the value of $2.50; and the said gold coins shall be receivable in all payments when of full weight according to their respective values; and when of less than full weight, at less values, proportioned to their respective actual weights.

Sec. 2. And be it further enacted, That all standard gold or silver deposited for coinage after the 31st of July next, shall be paid for in coin under the direction of the secretary of the treasury, within five days from the making of such deposit, *deducting* from the amount of said deposit of gold and silver *one-half of one per centum;* provided, that *no*

deduction shall be made unless said advance be required by such depositor within forty days.

Sec. 3. And be it further enacted, That *all gold coins* of the United States minted anterior to the 31st day of July next, shall be *receivable in all payments* at the rate of 94 8 of a cent per pennyweight.

THE LAW OF 1837.

Sec. 8. And be it further enacted, That the *standard for both gold and silver coins* of the United States *shall hereafter be such that of 1,000 parts by weight, 900 shall be of pure metal,* and *100 of alloy;* and the alloy of the silver coins shall be of copper and the alloy of the gold coins shall be of copper and silver, provided that the silver do not exceed one-half of the whole alloy.

Sec. 9. And be it further enacted, *That of the silver coins the dollar shall be of the weight of 412½ grains*; the half dollar of the weight of 206¼ grains; the quarter dollar of the weight of 103⅛ grains; the dime, or tenth part of a dollar, of the weight of 41¼ grains; and the half dime, or twentieth part of a dollar, of the weight of 20⅝ grains; and that *dollars, half dollars and quarter dollars, dimes and half-dimes, shall be legal tenders of payment, according to their nominal value, for any sums whatever.*

Sec. 10. And be it further enacted, That of the gold coins, the weight of the eagle shall be 258 grains; that of the half-eagle 129 grains; and that of the quarter-eagle 64½ grains. And that for all sums whatever, the eagle shall be a legal tender of payment for $10; the half-eagle for $5; and the quarter-eagle for $2.50.

Sec. 11. And be it further enacted, That the silver

coins heretofore issued at the mint of the United States, and the gold coins issued since the 31st day of July, 1834, shall continue to be legal tenders of payment for their nominal values, on the same terms as if they were of the coinage provided for by this act.

(Sections 14-19 provide that *the gold and silver bullion brought to the mint shall be received and coined for the benefit of the depositor*, and that *the only subjects of charge* to him shall be for *refining*, *toughening*, and *separating*, and *for metal used as alloy*, the rate of *charge* being fixed from time to time so as *not to exceed* the *actual expenses* incurred. For the net amount of the deposit a certificate shall be given, payable in coins of the same metal as the deposit. Sections 30 and 31 require that when the coins which are the equivalent to any deposit of bullion are ready for delivery they shall be paid over, payment being made to depositors in the order of priority of deposit. And, to enable the mint to make returns to depositors with as little delay as possible, it is made the duty of the secretary of the treasury to keep in the mint, when practicable, a deposit not exceeding $1,000,000, out of which the value of bullion brought to the mint may be paid as soon as ascertained; but no discount or interest is to be charged on moneys so advanced.)

THE GOLD DOLLAR. 1849.

The law of March 3, 1849, authorized the *coinage of gold dollars* and *double eagles*, "conformable in all respects to the standard for gold coins now established by law," and to be a legal tender in payment for all debts.

THE LAW OF 1853.

1852-53. Chap. LXXIX. An act amendatory of existing laws relative to the halt dollar, quarter dollar, dime and half-dime.

Be it enacted, That from and after the first day of June, eighteen hundred and fifty-two (three) the weight of the half dollar or piece of fifty cents shall be 192 grains, and the quarter dollar, dime, and half dime, shall be, respectively, one-half, one-fifth, and one-tenth of the weight of said half dollar.

Sec. 2. And be it further enacted, That the silver coins issued in conformity with the above section, shall be legal tenders in payment of debts for all sums not exceeding $5.

Sec. 3. And be it further enacted, that in order to procure bullion for the requisite coinage of the subdivisions of the dollar authorized by this act, the treasurer of the Mint shall, with the approval of the Director, purchase such bullion with the bullion fund of the Mint. He shall charge himself with the gain arising from the coinage of such bullion into coins of a nominal value exceeding the intrinsic value thereof, and shall be credited with the difference between such intrinsic value and the price paid for such bullion, and with the expense of distributing said coins as hereinafter provided. The balance to his credit, or the profit of said coinage, shall be, from time to time, on a warrant of the Director of the Mint, transferred to the account of the Treasury of the United States.

Sec. 4. And be it further enacted, that such coins shall be paid out at the Mint, in exchange for gold coins at par, in sums not less than $100; and it shall be lawful, also, to

transmit parcels of the same from time to time to the assistant treasurers, depositaries and other officers of the United States, under general regulations, proposed by the Director of the Mint, and approved by the Secretary of the Treasury, provided, however, that the amount coined into quarter dollars; dimes and half dimes, shall be regulated by the Secretary of the Treasury.

Sec. 5. And be it further enacted, That no deposits for coinage into half dollar, quarter dollar, dime and half dime, shall hereafter be received, other than those made by the Treasurer of the Mint, as herein authorized, and upon account of the United States.

(Section 6 provides that when gold and silver is deposited for coinage there shall be a charge to the depositor in addition to the charge for refining or parting of metals, of *one-half* of *one per centum*, this provision *not applying to silver* coined in the subdivisions of the dollar.

Sec. 7. And be it further enacted, That from time to time there shall be struck and coined at the Mint of the United States, and the branches thereof, conformably in all respects to law, and conformably in all respects to the standard of gold coins now established by law, a *coin of gold* of the value of $3 or *three units*. * * * Approved Feb. 21, 1853, 10 statutes at Large, 160.

SILVER DEMONETIZED.

Feb. 12, 1873.

1872-73. Chap. cxxxi. An act revising and amending the laws relative to the mints, assay offices, and coinage of the United States.

Sec. 13. That the standard for both gold and silver

coins of the Uuited States shall be such that of one thousand parts by weight nine hundred shall be of pure metal and one hundred of alloy. The alloy of the silver coins shall be of copper and the alloy of the gold coins shall be of copper or of copper and silver, but the silver in no case shall exceed one-tenth of the whole alloy.

Sec. 14. That the gold coins of the United States shall be a one-dollar piece, which, at the standard weight of twenty five and eight-tenths grains, shall be the unit of value; a quarter-eagle, or two-and-one-half dollar piece; a three dollar piece; a half eagle, or five dollar piece; an eagle, or ten dollar piece; and doubie eagle, or twenty dollar piece. And the standard weight of the gold dollar shall be twenty-five and eight-tenths grains; of the quarter eagle or two and one-half dollar piece, sixty-four and a half grains; of the three dollar piece, seventy-seven and four-tenths grains; of the half-eagle, or five dollar piece, one hundred and twenty-nine grains; of the eagle, or ten dollar piece, two hundred and fifty-eight grains; of the double eagle or twenty dollar piece, five hundred and sixteen grains; *which coins shall be a legal tender* in all payments, at their nominal value, *when not below the standard weight and limit of tolerance*, provided in this act for the single piece, and *when reduced in weight below said standard and tolerance, shall be a legal tender at valuation in proportion to their actual weight;* and any gold coin of the United States, if reduced in weight by natural abrasion not more than *one-half of one per centum* below the standard weight prescribed by law after a circulation of twenty years, as shown by its date of coinage, and at a ratable proportion for any period less than twenty years, *shall be received at their nominal value by the United States Treasury*

and its offices, under such regulations as the Secretary of the Treasury may prescribe for the protection of the government against fraudulent abrasion or other practices; and any gold coins in the treasury of the United States reduced in weight below this limit of abrasion shall be recoined.

Sec. 15. That the *silver coins* of the United States shall be a *trade dollar*, a *half dollar*, or fifty cent piece; a *quarter dollar*, or twenty-five cent piece; a *dime*, or ten cent piece; and the weight of the *trade dollar* shall be *four hundred and twenty grains Troy*; the weight of the half dollar shall be twelve gram (grammes) and one-half of a gram (gramme); the quarter dollar and the dime shall be respectively one-half and one-fifth of the weight of said half dollar; and *said coins shall be legal tender* at their nominal value *for any* amount not exceeding *five dollars* in any one payment.

(The standard silver dollar was omitted from the list given in section 15. It was claimed that this was done by fraud. This was the so called crime of 1873.)

Sec. 16. That the *minor coins* of the United States shall be a 5-cent piece, a 3-cent piece, and a 1-cent piece. The alloy for the 5 and 3-cent pieces shall be of copper and nickel, to be composed of three-fourths copper and one-fourth nickel. The alloy of the 1-cent piece shall be 95 per centum of copper and 5 per centum of tin and zinc, in such proportions as shall be determined by the Director of the Mint. The weight of the piece of 5 cents shall be seventy-seven and sixteen hundreds grains troy; of the 3-cent piece, thirty grains; and of the 1-cent piece, forty-eight grains; *which coins shall be a legal tender at their nominal value* for any amount not exceeding *25 cents* in any one payment.

Sec. 17. That *no coins*, either of gold, silver or minor coinage, *shall hereafter be issued* from the mint *other than those of the denominations, standards, and weights herein set forth.*

TRADE DOLLARS.

Sec. 21. That any owner of *silver bullion may deposit* the same at any mint, to be formed into bars, or into *dollars of the weight of 420 grains troy, designated in this act as trade dollars;* and no deposit of silver for other coinage shall be received; but silver bullion contained in gold deposits, and separated therefrom, may, however, be paid for in silver coin, at such valuations as may be, from time to time, established by the Director of the Mint.

Sec. 25. That the *charge* for converting standard *gold bullion* into coin shall be *one-fifth of 1 per centum.* The charges for converting standard silver into trade dollars, for melting and refining when bullion is below standard, for toughening when metals are contained in it which render it unfit for coinage, for copper used for alloy when the bullion is above standard, for separating the gold and silver when these metals exist together in the bullion, and for the preparation of bars, shall be fixed from time to time, by the Director, with the concurrence of the secretary of the treasury, so as to equal but not exceed, in their judgment, the actual average cost to each mint and assay office of the material, labor, wastage and use of machinery employed in each of the cases aforementioned.

THE LAW OF 1874.

Jan. 29, 1874. Revised statutes of the United States; title xxxix, legal tender.

Sec. 3,584. No foreign gold or silver coins shall be a legal tender in payment of debts.

Sec. 3,585. The gold coins of the United States shall be a legal tender in all payments at their nominal value when not below the standard weight and limit of tolerence provided by law for the single piece, and, when reduced in weight below such standard and tolerence, shall be a legal tender at valuation, in proportion to their actual weight.

Sec. 3,586. *The silver coins* of the United States *shall be a legal tender* at their nominal value *for any amount not exceeding five dollars* in any one payment.

Approved June 22, 1874. Revised Statutes 712.

Note. An act of June 22, 1874, authorizes the Secretary of the Treasury to exchange gold mint bars for coin certificates or gold coins at not less than par nor less than market value.

THE LAW OF 1875.

Jan. 14, 1875. Chapter xv. An act to provide for the resumption of specie payments.

Sec. 1. Be it enacted, That the Secretary of the Treasury is hereby authorized and required, as rapidly as practicable, to cause to be coined, at the mints of the United States, silver coins of the denominations of 10, 25 and 50 cents, of standard value, and to issue them in redemption of an equal number and amount of fractional currency of similar denominations, or, at his discretion, he may issue such silver coins through the mints, the subtreasuries, public depositaries, and postoffices of the United States; and, upon such issue, he is hereby authorized and required to redeem an equal amount of such fractional currency, until the whole amount of such fractional currency outstanding shall be redeemed.

Sec. 2. That *so much* of section 3,524 of the revised statutes of the United states *as provides for a charge of one-fifth of one per centum for converting standard gold bullion into coin is hereby repealed*; and hereafter *no charge shall be made for that service.*

THE LAW OF 1878.

Feb. 28, 1878. Chapter XX. An act to authorize the coinage of the standard silver dollar, and to restore its legal tender character.

Sec. 1. Be it enacted That there shall be coined, at the several mints of the United States, *silver dollars of the weight of four hundred twelve and one-half grains troy of standard silver*, as provided in the act of Jan 18, 1837, on which shall be the devices and superscriptions provided by said act; *which coins together with all silver dollars heretofore coined by the United States, of like weight and fineness, shall be a legal tender* at their nominal value, *for all debts* and dues public and private, *except where otherwise stipulated in the contract* And the Secretary of the Treasury is authorized and directed to *purchase* from time to time *silver bullion at the market price thereof, not less than $2,000,000 worth per month, nor more than $4,000,000* worth per month, and cause the same *to be coined monthly*, as fast as so purchased, into such dollars; and a sum sufficient to carry out the foregoing provision of this act is hereby appropriated out of any money in the treasury not otherwise appropriated. And *any gain or seigniorage arising* from this coinage *shall be accounted for* and *paid into the Treasury*, as provided under existing laws relative to the subsidary coinage; provided, that the amount of money at any one time invested in such silver bullion, exclusive of such resulting coin, shall not ex-

ceed $5,000,000. And, provided, further, that *nothing in this act shall be construed to authorize the payment in silver of certificates of deposit* issued under the provisions of section 254 of the Revised Statutes.

Sec. 2. That immediately after the passage of this act the president shall invite the governments of the countries composing the Latin Union, so-called, and of such other European nations as he may deem advisable, to join the United States in a conference to adopt a common ratio between gold and silver, for the purpose of establishing, internationally, the use of bimetallic money, and securing fixity of relative value between those metals; such conference to be held at such place, in Europe or the United States, at such time within six months, as may be mutually agreed upon by the Executives of the governments joining in the same, whenever the governments so invited, or any three of them shall have signified their willingness to unite in the same.

The President shall, by and with the advice and consent of the senate, appoint three commissioners, who shall attend such conference on behalf of the United States, and shall report the doings thereof to the President, who shall transmit the same to congress.

Said commisioners shall receive $2,500 and their reasonable expenses, to be approved by the Secretary of State; and the amount necessary to pay such compensation and expense is hereby appropriated out of any money in the Treasury not otherwise appropriated.

Sec. 3. That any holder of the coin authorized by this act may deposit the same with the Treasurer or any assistant treasurer of the United States, in sums not less than $10

and receive therefor certificates of not less than $10 each, corresponding with the denominations of the United States notes. The coin deposited for or representing the certificates shall be retained in the Treasury for the payment of the same on demand. Such certificates shall be receivable for customs, taxes, and all public dues, and when so received, may be reissued.

Sec. 4. All acts and parts of acts inconsistant with the provisions of this act are hereby repealed.

(Note. The above act having been returned by the president of the United States with his objections to the house of representatives, Feb, 28, 1878, was passed by both houses and became a law on the same day.)

THE LAW OF 1890.

July 14, 1890. Chapter DCCVIII. An act directing the purchase of silver bullion and the issue of Treasury notes thereon and for other purposes.

Be it enacted, That the Secretary of the Treasury *is hereby directed to purchase from time to time silver bullion to the aggregate amount of 4,500,000 ounces, or so much thereof as may be offered in each month, at the market price thereof, not exceeding $1 for 371 25* grains of pure silver, and to *issue in payment of such purchases* of silver bullion *Treasury notes* of the United states to be prepared by the Secretary of the Treasury in such form and in such denomination, not less than $1 nor more than $1,000, as he may prescribe, and a sum sufficient to carry into effect the provisions of this act is hereby appropriated out of any money in the Treasury not otherwise appropriated.

Sec. 2. That the *Treasury notes* issued in accordance with the provisions of this act *shall be redeemable on demand*,

in coin, at the Treasury of the United States, or at the office of any assistant treasurer of the United States, and when so redeemed may be reissued, but no greater or less amount of such notes shall be outstanding at any time than the cost of the silver bullion and the standard silver dollar coined therefrom then held in the Treasury purchased by such notes, and *such Treasury notes shall be a legal tender in payment of all debts, public and private, except where otherwise expressly stipulated in the contract*, and shall be receivable for customs taxes and all public dues, and when so received may be reissued; and such notes, when held by any national banking association may be counted as a part of its lawful reserve. That upon demand of the holder of any of the Treasury notes herein provided for the Secretary of the Treasury, shall, under such regulations as he may prescribe, redeem such notes in gold or silver coin at his discretion, it being the established policy of the United States to maintain the two metals on a parity with each other upon the present legal ratio, or such ratio as may be provided by law.

Sec. 3. That the secretary of the treasury *shall each month coin 2,000,000 ounces of the silver bullion* purchased under the provisions of this act into standar silver dollars *until the first day of July, 1891*, and *after that time he shall coin* of the silver bullion purchased under the provisions of this act *as much as may be necessary to provide for the redemption of the Treasury notes* herein provided for, and any gain or seigniorage arising from such coinage shall be accounted for and paid into the Treasury.

Sec. 4. That the silver bullion purchased under the provisions of this act shall be subject to the requirements of existing law and the regulations of the mint service governing the methods of determining the amount of pure silver contained, and the amount of charges or deductions, if any, to be made.

Sec. 5. That so much of the act of Feb. 28, 1878, entitled, "An act to authorize the coinage of the standard silver dollar, and to restore its legal tender character," as requires the monthly purchase and coinage of the same into silver dollars of not less than $2,000,000 nor more than $4,000,000 worth of silver bullion *is hereby repealed.*

Approved July 14, 1890

An act approved Sept. 26, 1890, discontinued the coinage of the three-dollar and one-dollar gold pieces and three cent nickel pieces.

THE LAW OF 1893.

Nov. 1, 1893: An act to repeal part of an act, approved July 14, 1890.

Be it enacted, That so much of the act approved July 14, 1890, entitled "An act directing the purchase of silver bullion and issue of Treasury notes thereon and for other purposes," as directs the Secretary of the Treasury to purchase from time to time silver bullion to the aggregate amount of 4,500,000 ounces, or so much thereof as may be offered in each month at the market price thereof, not exceeding $1 for 371.25 grains of pure silver, and to issue in payment for such purchases Treasury notes of the United States, be and the same is hereby repealed.

And it is hereby declared to be the policy of the United States to continue the use of both gold and silver as standard money and to coin both gold and silver into money of equal intrinsic and exchangeable value, such equality to be secured through international agreement, or by such safeguards of legislation as will insure the maintenance of the parity in value of the coins of the two metals, and the equal power of every dollar at all times in the markets and in the payment of debts.

PART II.

Value, Price, and Distribution.

A STUDY

IN

Value, Price, and Distribution,

BY

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CEDAR FALLS, IOWA.

CEDAR FALLS, IOWA.
GAZETTE BOOK AND JOB PRINTING HOUSE.
1902.

A Study in Value, Price, and Distribution

* * *

The Theory of Value from the Standpoint of Supply, Cost to the Producer.

SINGLE COMPETITION, DEMAND FIXED.

THE ENGLISH VIEW.

1. Will a man, as a rule, sell goods for less than cost?
2. What then will be any man's *minimum* selling price?
3. What will be his *maximum* selling price?

In the accompanying list, let each letter stand for a group of producers who have the skill and business ability to manufacture 1000 balls at a cost per ball, in labor and capital, as indicated by the figures.

A can produce 1000 balls at 15 cents each.
B " " " " " 16 " "
C " " " " " 17 " "
D " " " " " 18 " "
E " " " " " 19 " "
F " " " " " 20 " "
G " " " " " 21 " "
H " " " " " 22 " "

4. Now which of these groups produces at the greatest *advantage*? Explain your answer.
5. Which produces at the greatest *disadvantage*?
6. What will be the minimum selling price of A, of B, of E, of H?
7. With a demand for 1000 balls, which group will furnish the supply? Why?
8. At what price will they sell?
9. What would happen if they insisted on getting a cent more?
10. Answer the same question with a demand for 2000 balls.
11. With a demand for 3000 balls, what groups will furnish the supply?
12. What group will fix the price?
13. What will that price be?
14. Will not those producing at a *greater advantage* undersell him? Explain.
15. With a demand for 7000 balls, what groups will furnish the supply?
16. With an average demand for 7000 balls each year, what will become of the other groups?
17. Under the above conditions, what will be the profits of each producer?
18. What part of the needed supply is produced at the *greatest advantage*?
19. What part of the needed supply is produced at the greatest *disadvantage*?
20. By which is the price fixed?
21. By what then is the normal price, (natural price under perfect competition) fixed?

N. B. Formulate a careful general statement in reply to this question.

Problems Illustrating the Dependence of Price upon Cost of Production.

1. There are ten men each able to produce 1000 ball-bats at a cost respectively of 6, 7, 8, 9, 10, 11, 12, 13, 14, and 15 cents per bat. There is a demand for 6000 bats. Whose goods will be needed in the market, what will be the cost of the part of the needed supply produced at the greatest disadvantage, and what will be the normal price?

N. B. The man producing at the greatest disadvantage among those who supply the market, is on the edge of being crowded out, and is called the *marginal* producer. His cost of production is the marginal cost of production.

2. Under the following conditions, who is the marginal producer, what is the marginal cost of production, and what is the normal price?

A produces 1000 caps at 15 cents.
B " " " " 14 "
C " " " " 13 "
D " " " " 12 "
E " " " " 11 "

The demand is for 4000 caps.

3. Given a demand for 3500 tennis balls and the following conditions of cost of production.

A can produce 1000 tennis balls at 18 cents each.
B " " 1200 " " " 19 " "
C " " 1300 " " " 20 " "
D " " 1500 " " " 21 " "
E " " 900 " " " 22 " "
F " " 600 " " " 23 " "
G " " 500 " " " 24 " "

Required the (a) marginal producer, (b) the excluded producers, (c) the marginal cost, and the (d) normal price.

4. Five men raise grain with results as given below. The total *cost of production to each*, (in labor and capital) is $277.20, and the *demand 10505 bushels*. Which men will sell their grain, and what will be the normal price?

A's	product	was	3960	bu.
B's	"	"	3465	"
C's	"	"	3080	"
D's	"	"	2772	"
E's	"	"	2510	"
F's	"	"	2143	"

5. With a *demand for 3017 bushels*, and a total cost to each producer of $120.12, required the normal price under the following conditions:

A's	product	277	bu.
B's	"	858	"
C's	"	924	"
D's	"	1001	"
E's	"	1092	"

Utility.

Utility is the power to satisfy a human want. It is a relative quality depending both on the nature of the thing and the wants of the man. If there were no men, things would not be useful in the economic sense.

Things may be useful in one community and absolutely useless in another, e. g. a copy of Shakespeare in London and in the Cannibal Islands.

There are, then, two ways in which things may be given utility, viz: By affecting *them* in time, place or form so that

they shall appeal to some existing desire on the part of man, as in the carving of a beautiful statue out of crude marble, or by developing in man a desire for something he did not appreciate. A book-seller may have a hundred volumes treating of ancient art, but if no one in the community cares for that sort of study, the books have no utility. If now a university extension lecturer, by a series of talks, creates among the ladies of that town an interest in ancient art, the books come to have utility, and are soon sold by the book-seller.

Let the pupil give three or four other illustrations of creation or development of utility.

Absolute utility is utility in general, without regard to the *quantity* of the commodity. It is measured by the *importance* of the want which is satisfied. Thus air is one of the most useful things in the world, because it is necessary for the continuance of life. The absolute utility of *food* is also very great; so too is that of iron; for, in the form of tools and machinery, it is needed in the production of almost all of the food, clothing and shelter which we consider the necessaries of life. On the other hand, gold and diamonds, though very valuable, have a *small absolute utility*, being largely restricted to those uses which we call luxuries.

Make a list of ten things having small value but very high *absolute* utility.

Make a list of ten things having a large value and small absolute utility.

Do all things that are *valuable* have some absolute utility?

Do all things that have *absolute utility* have value? Give examples, and explain.

Effective utility (also called *final* and *marginal* utility) is utility with special regard to the quantity of the commodity

and the present needs of the individual. The effective utility of anything depends on how much we already have of it. Most of our wants are quickly satisfied, and our desire for anything decreases in proportion to the quantity we have to enjoy. The first chocolate cream gives us great satisfaction and we are quite eager for the next, but each successive bon bon gives less pleasure, their effective utility constantly decreasing until we do not care enough for the next to make the effort to pick it up, and in this fact we find the *law of satiety* or *diminishing utility*. The effective utility of the candy varies then with the quantity, decreases as the quantity increases, and is measured by the pleasure given by the *latest* (final) unit enjoyed.

If the commodity is capable of of several uses, we shall apply it to the most important use first, and if there is plenty of it we shall use it for less and less important purposes. Boehm Bawerk uses, as an illustration, the case of a man in the woods in winter time with five sacks of grain; the first being sufficient for the sustaining of life during the winter, the second assuring plenty, the third being fed to chickens that he may have a *variety* of food, the fourth being made into a liquor, and the fifth being used to feed parrots that he may be amused by their pranks. Now if one of these sacks of grain were destroyed the man would have to give up one of the five pleasures, and he would of course abandon the one that gave him the least satisfaction, viz.; the amusement afforded by the parrots. If any one asked him to *sell* one of the five sacks he would ask, in exchange, something that would give *at least as much satisfaction as the parrots*. This would be *his minimum selling price*. If he were asked to buy another, a sixth sack of grain, he would

naturally be willing to give for that sack something which was, in the pleasure it gave him, equal to the utility which he would get out of the sixth sack of grain. In short his *selling price* would be the measure of his *lowest satisfied want*, his *buying price* would be the measure of his *highest unsatisfied* want, *i. e.* the want to which he would apply the sixth sack. The *lowest satisfied want* and the highest unsatisfied want are so very near together that theorists in economics usually consider them the same, and so—Effective (final or marginal) utility is *measured by the lowest want satisfied* by the available goods. [1]

See summary of Definitions and Laws at close of this book.

Theory of Value from the Standpoint of Demand, Marginal Utility.

SINGLE COMPETITION, SUPPLY FIXED.

AUSTRIAN VIEW.

Will a man, as a rule, *pay more* for goods than he considers them worth *to him* ?

The buyer's maximum price will be the highest price he can afford to pay in view of the utility he finds in the goods.

1 Read Boehm-Bawerk's Positive Theory of Capital p. 154 f. n., also Ely's Outlines of Economics p. 125 f. n.

In the following list let each letter stand for a purchaser who can afford to buy at the price set against his name.

A's maximum price is 8 cents.
B's " " 9 "
C's " " 10 "
D's " " 11 "

1 Now if there is only *one* article or commodity in the market, and that must be sold, who will secure it? Why?
2. What price will he pay?
3. What will happen if he declines to pay over 10 cents?
4. Who will secure goods if there are two articles of the kind in the market?
5. What will the price be?
6 Why will there not be a different price for each purchaser?
7. If there are three articles in the market who will buy and what will be the price?
8. Who finds the greatest utility in the goods bought?
9. Who finds the least utility in the goods bought?
10 Which man is on the margin of being crowded out of the market?

N. B. The purchaser who is just able to secure goods at the current rate is called the marginal purchaser.

It will be seen, then, that the market price is fixed at the measure of utility to the marginal purchaser, i. e. the one who buys at the greatest disadvantage.

Problems Illustrating the Dependence of Price upon the Utility to the Buyer.

6. Several men desire to buy oats, Each will take 1000 bushels and estimates the marginal utility of oats to himself as equivalent to the price set against his name

in the following list. The supply of oats is fixed at 4000 bushels. Who is the marginal purchaser? What will be the price if they are all sold?

A's marginal utility 9 cents.
B's " " 10 "
C's " " 11 "
D's " " 12 "
E's " " 13 "
F's " " 14 "

7. A buyer's maximum price is the money measure of the effective or marginal utility of goods to him. In the following problem each buyer wishes to secure 1000 bushels of grain at the price indicated in the list. The supply of grain available is 5000 bushels. If it is all sold who is the marginal purchaser? What must the market price be?

A's maximum price is 21 cents.
B's " " " 22 "
C's " " " 23 "
D's " " " 24 "
E's " " " 25 "
F's " " " 26 "

8. With the following conditions find the marginal purchaser and the market price, the available supply being 2700 bushels.

A desires 1000 bu. at not more than 50 cents each.
B " 900 " " " " " 49 " "
C " 800 " " " " " 48 " "
D " 800 " " " " " 47 " "
E " 700 " " " " " 46 " "
F " 600 " " " " " 45 " "
G " 600 " " " " " 44 " "

What would-be purchasers will be excluded?

9. Find the marginal purchaser and the market price under the following conditions.

A desires 1000 bushels of grain at 18 cents or less.
B " 1200 " " " " 19 " " "
C " 1300 " " " " 20 " " "
D " 1500 " " " " 21 " " "
E " 900 " " " " 22 " " "
F " 600 " " " " 23 " " "
G " 500 " " " " 24 " " "

The available supply is 3500 bushels. Who will be excluded?

It will be seen that the market price is fixed at the equivalent of the effective utility to the marginal purchaser. The marginal utility to society is measured by the market price.

DOUBLE COMPETITION.

NEITHER SUPPLY NOR DEMAND FIXED.

SUPPLY. Sellers' Minimum Prices or Cost of Production.		DEMAND. Buyers' Maximum Prices or Marginal Utilities.	
A's minimum price	4 cents	F's maximum price	5 cents
B's " "	5 "	G's " "	6 "
C's " "	6 "	H's " "	7 "
D's " "	7 "	I's " "	8 "
E's " "	8 "	J's " "	9 "
		K's " "	10 "

1. What is the lowest price at which anyone can sell?
2. How many sell at that price?
3. How many can buy at that price?
4. How will the price be affected by these conditions?

5. If the price rises to 5 cents, how many buyers and how many sellers will there be ?
6. Will these conditions satisfy both buyers ayd sellers ?
7. In order to get enough goods, what must the buyers do?
8. If the price be raised to 6 cents, what will be the condition of supply and demand ?
9. Will the price tend to rise or fall ?
10. At 7c what will be the supply and demand ?
11. Will these conditions fix the price?
12. What, then, are the conditions which fix the price under double competition ? State carefully.
13. Under the following conditions, at what price will the supply and demand be equal ?

Supply—Sellers' Minimum Prices 6, 7, 8, 9, 10, 11.

Demand—Buyers' Maximum Price 8, 9, 10, 11, 12, 13, 14.

14. What groups represent the needed supply ?
15. Does the *marginal cost* coincide with the market price ?
16 What price measures the marginal utility to purchasers ?
17. Does it coincide with the market price ?

N. B. Under perfect (free) competition marginal cost and marginal utility will coincide, and the market price will be the price at which supply and demand are equal.

PROBLEMS UNDER DOUBLE COMPETITION.

Find the market price under the conditions stated in each of the following problems. The quantity offered by each seller and desired by each buyer is always the same.

10. Sellers' Minimum Prices 40, 41, 42, 43, 44.
Buyers' Maximum Prices 38, 39,40, 41, 42, 43, 44.

11. Sellers' minimum prices 65, 66, 67, 68, 69, 70.
Buyers' maximum prices 64, 65, 66, 67, 68, 69.

12. Sellers' minimum prices 85, 86, 87, 88, 89.
Buyers' maximum prices 82, 83, 84, 85, 86, 87.

13. Sellers' minimum prices 8, 9, 10, 11, 12, 13.
Buyers' maximum prices 7, 8, 9, 10, 11. 12.

14. Sellers' minimum prices range from 7 to 17 inclusive.
Buyers' maximum prices range from 10 to 21 inclusive.

15. Sellers' prices range from 6 to 15.
Buyers' prices range from 10 to 14.

16. Sellers' prices range from 8 to 14.
Buyers' prices range from 11 to 16.

17. Sellers' prices range from 8 to 13.
Buyers' prices range from 10 to 14.

18. Sellers' prices range from 3 to 12.
Buyers' prices range from 9 to 16.
In this problem is any there price at which the supply and demand are equal?
What is the supply and what the demand at 10?
Will the price tend to rise or fall?
What is the supply and what the demand at 9?
Will the price tend to rise or fall?
The market price will be *somewhere between 9 and 10.*

Problems Where all Intermediate Prices are not Represented.

19. Sellers' prices 2, 4, 6, 8, 10, 12, 14.
Buyers' prices 10, 11, 12, 14. 15, 16, 18.

20. Sellers' prices 11, 12, 13, 14, 15, 17, 18, 20.
Buyers' prices 11, 12, 13, 15, 17, 22, 25, 26, 27.

21. Add to the above conditions a purchaser and seller at 16 and find the market price.

22. Sellers' prices 4, 6, 8, 12, 14, 15, 19, 22.
Buyers' prices 24, 22, 20, 18, 16, 15, 14, 13, 12.

23. Sellers' prices 36, 35, 33, 31, 30½, 29½, 28.
Buyers' prices 32, 33. 34, 36, 38, 40

N. B. Solve each of these problems by the use of demand and supply curves on cross-section paper.

The method of finding the market price of goods illustrated in these problems under double competition is the same as that used in the Berlin Stock Exchange. In this exchange the persons who buy and sell stocks do not make their bargains directly with each other, but submit their bids for and offers of stocks to a committee who enter such bids and offers in tabular form, as in the problems below, and figure out the price of the stocks for the day.

24. What will be the market price of C. & G. R. R. stock according to the following statement of bids.

DEMAND.

A desires 25 shares at 1.12
B " 20 " " 1.13
C " 15 " " 1.14
D " 10 " " 1.15
E " 5 " " 1.16

SUPPLY.

F will sell 10 shares at 1.12
G " " 10 " " 1.13
H " " 10 " " 1.14
I " " 15 " " 1.15
J " " 20 " " 1.16

25. Find the market price of Little Giant Mining stock with the following bids:

DEMAND	SUPPLY
14 shares at 1.19	10 shares at 1.19
10 " " 1.20	21 " " 1.20
11 " " 1.21	14 " " 1.21
16 " " 1.22	11 " " 1.22
18 " " 1.23	10 " " 1.23

Distribution.

Distribution is the division of wealth among those who have aided in producing it. The share of each producer should be proportionate to his efficiency in the production. In his large work on the distribution of wealth, Professor J. B. Clark says:

"It is the purpose of this work to show that the distribution of the income of society is controlled by a natural law, and this law, if worked without friction, would give to every agent of production the amount of wealth which that agent creates.—

For an understanding of the plan on which this book is arranged, it is necessary to note that the principle of *final productivity*—which, as the book claims, is at the basis of the law of wages and interest—can be stated in a few words; but when it is so stated, the significance of the terms used requires very extended defining. Interest, for example, is said to depend on the productive power of the final (marginal) unit of social capital." [1]

The agents of production are:

1. Land.
2. Labor.
3. Capital.

Of these the first two are essential, and capital is a second-

1. J. B. Clark's Distribution of Wealth p. IX.

ary agent, being, itself, a combination of land and labor. Labor occurs in two forms, viz: That of the ordinary employee who works for *wages*, and that of the employer (undertaker, entrepreneur) who hopes for *profits* as the result of his superior business ability and management.

The government, acting for society through its laws and courts, makes the possession of property secure and may, therefore, be considered an agent performing a certain kind of labor. We have then the following

TABLE OF DISTRIBUTION.

Agents of Production.	Sharers in Distribution.	Share or Portion.
1. Land.	Landlord.	Rent.
2. Labor.	Wage Earner.	Wages.
	Employer.	Profits.
	Society.	Taxes.
3. Capital.	Capitalist.	Interest.

We shall study these shares of the distributed product in a different order from the above, and shall first consider interest.

THE LAW OF INTEREST.

FROM THE STAND POINT OF PRODUCTIVITY.

From the business man's stand point interest is the price paid for the use of money. Money being *representative* capital, *i. e.*, capital capable of being changed into any kind of *capital goods* one may desire.

What the price shall be which one must pay for the use of money will depend on the *adjustment* of *supply and demand for loan capital* (money.) What each man estimates money to be worth to him for investment or for enjoyment constitutes its utility or productivity to him and is his maximum rate.

DEMAND.				MEASURE OF UTILITY.
A desires $1000 at a maximum rate of				5%
B	"	"	"	6%
C	"	"	"	7%
D	"	"	"	8%

1. If there is only $1000 available in the money market, who will be the successful borrower? Why? At what rate? Why?
2. If there is a supply of $3000 that must be loaned, at any rate, what borrowers will secure the loan? At what rate?
3. Which of these borrowers is investing or using the money at the greatest advantage?
4. Which part of the capital is invested at the *greatest disadvantage?*
5. Who is the marginal borrower?
6. Remembering that each borrower's maximum rate means the *productivity* of capital to him, by what is the rate of interest fixed?

N. B. The student should now use the above suggestions to demonstrate the following expressions of—

THE LAW OF INTEREST. "The rate of interest is determined by the productiveness of that last (considerable) part of the supply which is applied to industry at the greatest disadvantage." [1]

"The rate of interest is, then, *commensurate with* the marginal desirability of wealth,—speaking roughly, with the marginal (final) productivity of capital." [2]

"Interest . . . is said to depend on the productive power of the *final* (marginal) unit of social capital." [3]

1. Walker's Elements of Political Economy, 243.
2. Davenport's Elementary Economics p. 104.
3. J. B. Clark's Distribution of Wealth, p. 1X.

Briefly, *the rate of interest is determined by the productivity of capital in the hands of the marginal borrower.* President Hadley says "We must note that interest is *not* a *natural return* for capital *independent of skill.* The power of capital to yield interest is dependent upon the skill with which it is managed. A borrower offers interest because *he thinks* he has the ability to earn it. The rate which capital commands will depend primarily upon the *borrowers' estimates* of their skill in this respect, rather than upon any natural or inherent qualities in capital itself." [1]

Interest under Double Competition. President Hadley gives the following statement which may be taken as a general law of interest from the stand point of double competition. "We may say, in a rough way, that the *rate of interest* in any business *tends to a point where the demand* for capital on the part of those who think their profit will exceed that rate *equals the supply* furnished by those who think that it will not?" [2]

Supply—Lenders' Minimum Rates 4 5-6 7-8-9
Demand—Borrowers' Maximum Rates 5-6-7-8-9-10.

1. Find the current rate of interest under the law of value.
2. Is this law inconsistent with the laws given previously?

N. B. The rate of interest is, generally speaking, fixed at that point where the demand for and supply of capital are equal.

3. Is there any similarity between this statement and that of President Hadley?

1. Hadley's Economics p. 268
2. Hadley's Economics, p. 271-2

4. Do all men pay the same rate of interest at the same time and in the same market?
5. Are the loans all made under the same conditions?
6. Would you lend $1000 on good security for thirty days on the same terms as you would for five years?
7. How does the fact of short time affect the rate of interest?
8. Would you lend $1000 for five years, with the privilege of payment *on or before* maturity, at the same rate as if you were sure that for five years you would not have to find a new borrower?
9. Do people sometime loan money on rather doubtful security if they can get a high rate of interest?
10. Why is it that the government of the United States can so easily borrow money at two and three per cent.?
11. Is not an excess above the current rate on first-class securities a sort of *insurance* against loss?

Interest has been defined by economists as that part of the product which goes to the capitalist for the use of his capital. By the business man it is considered the price paid for the use of money. Some later economists define interest as the excess in value of present over future goods. In any of these cases the rate of interest will be determined, like value of other things, by the estimated utility to the marginal borrower, whether we say the marginal estimate of the excess of present over future goods, or the marginal estimated productivity of capital about to be invested, or the price which the marginal borrower is willing to pay for the use of money. For the sake of simplicity let us consider the capital offered for investment as a species of goods offered for sale for a limited time. According to our laws of price and value, the rate will be determined by the estimated utility of capital to

the least eager (marginal) borrower, that is by the final productivity of capital, by the productivity of that portion of capital which is applied to industry at the greatest disadvantage.

Usury.

It is a common custom for the government to interfere in the loaning of money and to fix a maximum limit to the rate of interest that may be charged. This is done in behalf of the borrower who is supposed to be at a disadvantage in dealing with the lender.

1. If money is drawing 12% in a certain community, and the security is good, will outside capital seek or shun that market?
2. What will be the effect on the rate of interest?
3. Suppose, now, that the government forbids a higher rate than 8%, will outside capital seek or shun that market?
4. Will *local* money lenders find means to evade the law?

N. B. There are various ways to evade usury laws; [1] a commission is frequently charged under various names, and though the letter of the law is kept, its spirit is violated, and, because local capital is scarce and outside capital has no inducement to come in, the real rate of interest remains about 12%.

5. On the whole, what do you think of the wisdom of passing usury laws?
6. What action has your own state taken in this matter?

It is a well known fact that in a new community where the opportunities for investment are promising and capital is scarce, the rate of interest is always high, and in old, well

1 Walker's Elements p, 244.

settled communities, where there is much wealth seeking investment, rates are low. Rates of interest almost invariably fall as a community grows in age and wealth.

THE LAW OF WAGES.

Wages is the share of the product which falls to the laborer on account of the value (productiveness) of his labor. Let us consider what determines the value and the market price of labor.

Application of the Laws of Value and Price to the Labor Question.

AUSTRIAN LAW.

Although it is not strictly correct to call labor a *commodity*, inasmuch as we do not buy and sell labor but the products of labor (see Wealth and Services), nevertheless, wages are conveniently treated as the *price* of labor, and are usually discussed on this basis. Let us consider labor under the law of marginal utility with the *supply fixed.*

The utility of labor to any employer is measured by the product that labor turns out for that employer. Now it is evident that the same gang of average laborers will prove more productive to one employer than to another, on account of his *better business management.* But labor cannot expect to receive wages in excess of its productivity to the employer. To which employer ? Let us examine

The following list shows the maximum wages (measure of the utility of labor) that each employer can pay for labor, and the number of laborers needed by each employer at his maximum price or less.

DEMAND FOR LABOR.

A desires 100 laborers at maximum rate of 6 cents an hour
B " " " " " " " 7 " " "
C " " " " " " " 8 " " "
D " " " " " " " 9 " " "

1. If there are only 100 laborers to be had at any price, which employer will secure them?
2. What price must he pay?
3. If there are 300 laborers, which men will hire them?
4. Who is the marginal employer?
5. What will he be able to pay?
6. Will the other employers pay any more?
7. What then will be the current wages?
8. What is the measure of the productivity of labor to the marginal employer?
9. Does it coincide with current wages?
10. What then is the law of wages from *the standpoint of demand*?

Problems in Labor and Wages.

AUSTRIAN VIEW.

DEMAND FOR LABOR.

Productivity of Labor

26. A needs 100 men at 5 cents an hour
B " " " " 6 " " "
C " " " " 7 " " "
D " " " " 8 " " "
E " " " " 9 " " "
F " " " " 10 " " "
G " " " " 11 " " "
H " " " " 12 " " "
I " " " " 13 " " "

The supply of laborers is 500. What will the current wages be?

27. A needs 50 men at 7 cents an hour
B " 48 " " 8 " " "
C " 92 " " 9 " " "
D " 75 " " 10 " " "
E " 103 " " 11 " " "

Only 270 men can be found to meet the needs of these employers. What will the current wages be ?

28. If *all laborers* would work so much more carefully and faithfully that *each employer* would get *one cent more product* from his laborers per hour, would the wages be raised by the competition of the employers ? Change the conditions of the above problem and find the resulting wages.

The law of wages from the view point of utility or productivity has been expressed by Mr. Walker as follows: "The rate of wages, determined by the productiveness of labor at the hands of the least competent employer (marginal employer) will become the rate of wages for all labor."[1]. Henry George from a *somewhat similar* standpoint, but emphasizing the influence of land and the law of rent, says: "Wages depend on the *margin of production*, or upon the produce which labor can obtain at the highest point of natural productiveness open to it without paying rent."[2] Prof. John R. Commons quotes Mr. George as fixing wages at the productivity of labor *on no rent land.*[3] Dr. E. T. Devine says "The law of wages, as given by Henry George, is that laborers will receive all that their labor can produce upon the poorest land which it is necessary to cultivate.[4].

This law is illustrated by the fact that in early colonial times, servants drew higher wages in America than in Europe, because if dissatisfied they could go to farming on practically free land.[5]

All these quotations are different expressions of the law of wages as based on productivity or marginal utility.

1, Elements of Political Economy p. 253.
2, Progress and Poverty, Book III, Chap. VI, p. 213.
3, Distribution of Wealth, p. 175.
4, Economics p. 387
5, Bullock's Economics, p. 28.

English Law

Can the question of labor and wages be discussed from the standpoint of cost of production? What is the cost of production of labor? Evidently the *cost of raising* and *maintaining* the laborer, or the price that must be paid to enable the laborer to support himself and family according to the *standard of living* necessary to keep the laborer in *effective* condition. All modern economists claim that if the standard of living is crowded down too low by cruel employers, the condition of the laborer is so impaired that he is less and less productive.

La Salles' Iron Law of Wages held that the laborer was helpless to resist this lowering of wages, and therefore wages would always tend to fall to the standard of living which just provides the necessities of life. This is indeed the case when the number of laborers is greatly in excess of the demand and the state of the laborer is such politically, socially and industrially that he cannot resist this pressure. The competition is then very imperfect and employers are apt to combine for the reduction of wages, while the needs of the laborer prevent effective combination on his part. If however laborers are so situated that they can refuse to work unless they get wages that insure a *comfortable standard of living*, they may force the employers to pay higher wages since the demand for labor will exceed the supply. This was the case after the Black Death, (1349 A. D.) in the reigns of Edward III and Richard II, when because of the great reduction of the laboring population, and in spite of the *Statute of Laborers* (1351 A. D.) forbidding the increase, wages rose to a very marked degree. In 1381 A. D. these conditions led to the Peasants' Revolt under Wat Tyler, an account of which can be read in Cunningham's Outlines of English Industrial History pp 41-44, and in Gibbins' Industrial History of England pp 67-74.

Remembering that *cost of production* of labor means *standard of living* and that the *minimum wages* for which a man or group of men will work *means the standard of living* upon which they insist, let us consider the following conditions:

100 men willing to work at minimum wage of 6 cents per h
100 " " " " " " " " 7 " "
100 " " " " " " " " 8 " "
100 " " " " " " " " 9 " "
100 " " " " " " " " 10 " "
100 " " " " " " " " 11 " "

1. If there are only 100 men *needed* which men will be employed and at what price? Why?
3. If 300 men are needed what will be the wages paid?
3. What will be the marginal standard of living?
4. Who are the marginal laborers?
5. From the view-point of standard of living (cost of production,) how would you state the law of wages?

Mr. George Gunton, in his *Wealth and Progress*, has discussed the various laws of wages suggested by La Salle, Walker, and George, and gives his own opinion as follows. "Therefore we may say *the chief determining influence* in the general rate of wages in any country, class, or industry, *is the standard of living* of the *most expensive families* furnishing a *necessary part of the supply of labor* in that country, or industry."[1]

In short wages may be said to be determined by the standard of living of the marginal laborers, i. e., the laborers who cost the employers the most.

All efforts to raise the standard of living on the part of laborers will, *if properly conducted*, tend to an increase of wages. Most of the methods, of the trades unions look in this direction rather than towards increasing productiveness.

This point will be discussed further later on.

1, Wealth and Progress, p. 86.

Problems in Labor Under Double Competition.

28. Find the rate of wages under the following conditions.

Supply of Laborers. Standard of Living.			Demand for Labor. Productivity of Labor to Employer.			
100 at	5c	an hour.	A needs	100 men at	5c	an hour.
100 "	6c	"	B "	100 "	6c	"
100 "	7c	"	C "	100 "	7c	"
100 "	8c	"	D "	100 "	8c	"
100 "	9c	"	E "	100 "	9c	"
100 "	10c	"	F "	100 "	10c	"
100 "	11c	"	G "	100 "	11c	"
100 "	12c	"	H "	100 "	12c	"
			I "	100 "	13c	"

29. Increase the productivity of labor one cent per hour in each group and find the rate of wages.

30. Increase by one cent the standard of living of each group in this problem, leaving the productivity as at first, and find the rate of wages.

31. Increase *both* standard of living and the productivity by one cent and find the rate of wages.

This shows that *two things* are necessary, if laborers would secure an increase of wages equal to their increased productiveness, viz.: *greater efficiency and insistence on a higher standard of living*.

Are both of these points equally emphasized in the ordinary plans for the laboring classes?

The Wage Fund Theory is that a certain portion of capital is set aside for wages. The average wage is obtained by dividing the wage-fund by the number of laborers, and the only way to increase wages is to decrease the number of laborers. This theory, though generally advocated early in the XIX century, is now discarded by most economists.

Wages and Competition.

Speaking of the history of wages and competition, Prof. Clark says: "The historical fact of the past three hundred and fifty years has been that real wages have declined for three centuries and advanced for half a century. The decline was not continuous; there was a rapid fall, a partial recovery, and a second fall, leaving the workmen, in other than favored countries, in extreme wretchedness. This great decline took place during an era of generally conservative competition; while the advance which has followed it has been recent, and has taken place in an era in which the money-getting spirit has overcome the former conservative influences, and in which, in the fields in which it survives, it has been of an unsparing character." [1]

Real and Nominal Wages.

It should be remembered that "*real wages* are the remuneration of the laborer as reckoned in the necessaries, comforts, and luxuries of life," [2] while wages as expressed in money are only *nominal* wages, varying with the purchasing power of money.

In good times when (nominal) wages are high, goods are also apt to sell at a high price, making *real wages* less than people suspect. On the other hand real wages in hard times are sometimes, especially in case of salaries, much better than they seem, on account of low prices of goods.

In his Handbook on Currency and Wealth, George B. Waldron gives some very interesting tables showing the relative purchasing power of wages in successive years from 1840 to 1892. [3] By these tables the *relative purchasing power of wages rose* between 1840 and 1892 *from 84.4 to 181*, while the *length of the day* of labor *decreased* from *11.4 hours to 10 hours*.

1. "Philosophy of Wealth p 131, Read also Gide's Political Economy p 503."
2. Walker's Advanced Political Economy, p. 245.
3. Handbook of Currency and Wealth. pp, 82-85.

Profits.

Profits is the part of the product which goes to the proprietor or employer (entrepreneur or undertaker) on account of his superior business management. It is a well known fact that several men may invest the same amount of money in capital and the employment of labor, and yet because of *varying ability in managing their business*, the quantity of goods produced varies, and therefore the cost of production of a single article will be much less for the best business managers.

We have learned that the market price of goods is fixed by the *cost of production* to the marginal producer; it is therefore evident that all who can, by superior ability, produce for less will have a *profit*.

ORIGIN OF PROFITS.

Let us consider one of our previous problems. In the first study of value on pages 3 and 4, we have found employers producing balls at costs varying from 15 cents to 22 cents each. With the demand for 7,000 balls, G would be the marginal producer and his cost would be the normal price of the goods. Now if all the successful employers had had the same business ability as G each would have produced at 21 cents and none of them would have made any profit. Not until there was some difference in business ability among those supplying the market would there be any profits for any of them. Each would have to be content with simple wages of superintendence. Difference in business ability and business management is indicated by difference in cost of production.

COST OF PRODUCTION.

In the sense usually employed, the cost of production includes all the expense growing out of the use of labor and capital. The cost of labor is for wages of *employees*, and the compensation to the *marginal* employer which prevents his giving up the business and becoming an employee. This compensation is a sort of *wages of superintendence* which he allows himself, and if his ability as a manager fails to keep him assured of this, he is crowded out of the business. There is also the *labor of society* through its legislature, courts and executives, by which possession of property is secured and production facilitated.[1] The *expense of this labor* is represented in taxes. The cost of production may be expressed as follows:

I. Cost for capital.
   1. Replacement.
      (a) Wear and tear of machinery, buildings, etc.
      (b) Materials.
   2. Insurance.
      (a) For risk of loss in the business.
      (b) For loss by fire and tornado.
   3. Interest on investment at current rates.

II. Cost for labor.
   1. By employees = Wages.
   2. By Employer = Wages of superintendence.
   3. By Society = Taxes.

1. See Clark's Philosophy of Wealth pp. 11-12.

THE MEASURE OF PROFITS.

I. FROM THE STAND POINT OF COST AND PRICE.

If these profits originate in difference in business ability and business management, how are profits measured? In the third problem on p. 5, we have seven employers with varying business ability as indicated by the cost of production in each case.

3. Given a demand for 3500 tennis balls and the following conditions of cost of production.

PRODUCER	PRODUCT	COST OF PRODUCTION
A	can produce 1000	tennis balls at 18 cents each.
B	" " 1200	" " " 19 " "
C	" " 1300	" " " 20 " "
D	" " 1500	" " " 21 " "
E	" " 900	" " " 22 " "
F	" " 600	" " " 23 " "
G	" " 500	" " " 24 " "

1. With the given demand, who is the marginal producer?
2. What is his cost of production?
3. What will be the *market price*?
4. What will be the profits of the marginal producer?
5. Who will be driven from the business because of the expense of production?
6. What will be the profits to each of those who *do supply* the market?
7. By what will the profits be measured in each case?
8. Show that profits are measured by the excess of market price above cost of production.
9. Show that profits are measured by the degree to which any employer can reduce his cost below that of the marginal producer.
10. Which is the better way to express the law?
11. Is the function of the employer to raise the market price above his cost, or to reduce his cost below market price?

THE MEASURE OF PROFITS.

II. FROM THE STAND-POINT OF PRODUCTIVENESS—UTILITY.

Let us now consider the measure of profits from the stand-point of productiveness—utility.

In the following problem five business men invest $252.00 each in labor and capital. With this investment

Prob. 32. A produces 1890 baskets

B " 3050 "
C " 3600 "
D " 4200 "
E " 5040 "

1. Which of these proprietors has the best business ability? Which has the poorest?
2. If the demand is for 12840 baskets, what proprietors, (entrepreneurs) will be crowded out of the business?
4. Of those who supply the market, who will, with his $252, produce the largest quantity of utility, (product.)?
5. Who will produce the least? What do you call him?
6. How much of his product must the marginal entrepreneur sell to cover expenses? [1]
7. How much of his product must each of the other entrepreneurs sell to cover *his* expense?
8. Which will have a surplus of product after paying expenses?
9. What do you call this *surplus*?
10. Formulate a careful statement of the measure of profits as expressed in products.

1. Remember that cost or expense includes the proprietor's wages of superintendence.

The Effect of Profits on Price.

It is often claimed that *Large profits cause high prices*, but the claim is without foundation under free competition, and true only to a limited degree under monopoly. Indeed the truth of the matter may be fairly indicated by the following theorems:

THEOREM I. *Profits may be increased while the price remains the same.*

Let the following statement show the cost of production to eight different undertakers, each producing 1,000 balls at the retail cost set against his name in the list.

A, B, C, D, E, F, G, H.
15- 16-17- 18- 19- 20- 21- 22.

If now the demand is fixed at 5,000 balls, who will be the marginal undertaker or entrepreneur? and what will be the market price?

What will be the profits for each producer?

Suppose now that A, B, C and D, all succeed in reducing the cost of their product one cent each; will the profits be increased?

Will the price be changed?

Make a demonstration based on these questions to prove the above theorem.

THEOREM II. *Profits may be increased while the price is diminished.*

Let the student make a demonstration of his own for this theorem.

Mr. Walker has said [1] "Prices, then are not high because profits are made; but profits are made because

1. Walker's Elementary Political Economy, p. 221.

prices are high." Although this is true in the sense in which he meant it, we must not draw the conclusion that high prices are the efficient cause of large profits, for

THEOREM III. *Prices may be increased while the profits remain the same.*

As above, with a demand for 5000 balls, what will be the effect on price, if the cost of the material increases the cost of production one cent in each case?

Will there be a corresponding increase in profits?

Write out a demonstration of this theorem.

THEOREM IV. *Prices may be increased while profits decrease.*

Write out a demonstration of this theorem.

PROFITS AND WAGES.

There is a common feeling among the working people that wages are low because profits are high,—that large profits are practically taken out of wages. There is, therefore, a feeling of antagonism toward employers who make large profits.

Where the charge is a true one, the fault lies in an imperfect competition which gives the employers an unfair advantage, for under free competition we shall have conditions somewhat as follows:

A wishes to hire 1000 men at a maximum wage of 9c per hour

B	"	"	"	"	10c	"
C	"	"	"	"	11c	"
D	"	"	"	"	12c	"
E	"	"	"	"	13c	"
F	"	"	"	"	14c	"
G	"	"	"	"	15c	"
H	"	"	"	"	16c	"

If the supply of laborers is 8000, what will be the current wages?

Now if F, G and H increase their business so as to need 2000 men each, and there is no increase in the supply of laborers, who will be the marginal employer, and what will the wages be?

What class of employers will be excluded from business?

Will the results be better or worse for the wage-earners?

If G and H increased their business so as to need 4000 men each, what will be the results as to wages?

Under the law of wages (determined by productivity) will wages be higher or lower when the best business managers absorb the supply of labor?

Is it possible for the employers to avoid paying higher wages *under perfect competition?*

How would it affect the situation if the wealthy employers should send agents to Europe to advertise for and encourage immigrant laborers to come over here, or should entice outside labor into this vicinity till the supply of labor is increased to 11000?

What would the wages be then?

Is anything like this done in practical business life?

Has the government ever interfered to prevent such practices? If so, how?

Is such interference wise? Explain.

Suppose that H and G should *combine* their factories into one and try to kill off competition with the other employers by raising the wages to 15c and cutting the price of goods to their narrowest margin, could they drive the others out of business?

Would the result be good or bad for labor, as far as *nominal wages* [1] is concerned?

How would it affect laborers in their *real wages* if not only these employers but the strongest business men in all lines of necessary goods should also combine? [2]

Have real wages increased under the regime of combines and trusts that have become so prominent? (See Mr. Clark's statement as quoted on p. 28, also Waldron's Table of Comparative Wages quoted on page 41.)

Will any combination of captains of industry ever be able to shake off the *latent, potential* (possible) competition of these other producers represented by A, B, C, D, etc?

If they do it at all, must they not do it by keeping *prices* below, or wages above the reach of these would-be competitors?

Are the prices of most trust-produced articles lower today than in the old days before the great combinations?

Compare prices of goods in the various tables quoted on page 42.

It will be seen by these studies that the real and *efficient cause* of profits is *not* in *high prices*, but in a *larger production* for the same cost, or a *reduction of cost below market price.*

In the struggle between labor and capital (more strictly speaking, between laborers and employers) the inequality of chances is increased for the laborer by his *ignorance*, his *imprudence*, the size of the family dependent upon him, and by the violence and short-sightedness of his leaders. Early marriages load the majority of the working men down with

1. For nominal and real wages see p. 28.
2. Always presupposing free competition.

heavy responsibilities and expenses, their tobacco and beer and other small vices make inroads on their savings and effectually prevent those accumulations in the savings bank which are the very sinews of war when the time comes for resistance to the unjust demands of their employers. The maintenance of a good standard of living (p 27) therefore becomes a difficult matter. The introduction of cheap immigrant labor, contrary to law, is also a very potent factor of unfair competition.

THE LAW OF MONOPOLY PRICE.

The pure profits of the undertaker, or entrepreneur, are just and fair profits under free competition, but when, by *combination*, *legal enactment*, or *natural conditions*, the control of the market falls into the hands of a monopoly, the conditions are changed.

It sometimes happens that, temporarily, one person or combination gets control of the supply (a corner) and restricts the sale till prices rise to suit his greed.

To see how this might be, let us suppose conditions are as follows:

THE SUPPLY OF OIL.

PROBLEM 33.

Oil well No.	1	produces	1,000,000	gals.	of oil @	8c
" "	2	"	"	"	"	9c
" "	3	"	"	"	"	10c
" "	4	"	"	"	"	11c
" "	5	"	"	"	"	12c

DEMAND.

Market No.	1	calls for	1,000,000	gals.	@	12c
" "	2	"	"	"		13c
" "	3	"	"	"		14c
" "	4	"	"	"		15c
" "	5	"	"	"		16c

1. Find the market price.
2. Find the legitimate profit to each producer.

Now suppose that one man or a trust secures control of all these oil wells, and by good business management, reduces the cost of production to 8 cents at each well. The demand of the public remains the same, but we now have a case of single competition (or one-sided competition). The consumers still compete with each other for the purchase of oil, but the producers or sellers are united and do not compete.

If the trust offers its whole product of 5,000,000 gallons, what will be the market price?

Will the trust have any advantage over the most successful oil producer under the previous conditions.

Will its profits be fair and just?

But suppose the monopolist withholds 1,000,000 gallons, what will be the effect on price?

Will his total receipts leave him a profit on his investment?

What rate per cent. will he clear?

If he withholds 2,000,000 gallons, what will the market price be?

What will he clear?

If he offers only 2,000,000 gallons, what will be the price.

Will his total receipts cover expenses?

Why will he not force the price still higher by withholding yet more of the oil?

At what price will his own best interests require him to sell? Why? State carefully.

TABLE SHOWING THE PRINCIPLE OF MONOPOLY PRICE.

With a Supply of	Cost per Gallon.	Total Cost Expense of Production.	Market Price.	Receipts.	Total Gain Above Expense.	Per Cent Gain to Trust.
5,000.000 gal	8c	$1,000,000	12c	$600,000	$200,000	50%
4,000,000 "	10c	"	13c	520,000	120,000	30%
3,000,000 "	13⅓c	"	14c	420,000	20,000	5%
2,000,000 "	20c	"	15c	300,000	−100,000	−25%
1,000,000 "	40c	"	16c	160,000	−240,000	−60%

We find then that the monopolist can not fix the price of his goods without regard to the needs of the people, but finds himself subject to the law of monopoly price, viz: *The monopolist is forced by self interest to sell at that price whose excess above cost, multiplied by the demand, gives the largest profit.*

It is a well known fact that the Banana Trust destroyed large quantities of bananas which had cost them good money, and by reducing the supply obtained a price which netted them larger profits. Some goods of a less perishable kind can be withheld from the market for the time being so as to raise the price, and afterwards can be sold at a profit.

PROBLEM 34. Change the conditions in the last problem so that the respective prices of the demand shall run from 10 cents to 14 cents, and prepare a table like that above, and find the price under monopoly and under free competition.

MONOPOLY PROFITS.

The profits of the monopolist are supposed to be higher than those obtained under free competition, but under the law of monopoly price, it is sometimes true that the large sales at a low price make it desirable to sell lower than the competitive price would have been with a number of small producers furnishing the market. This is true in the last case. cited (problem 34.) Usually. however, monopoly prices are supposed to be a little higner than the market price would be under free competition, though it is probably a very difficult thing to say what prices would have been under a free competition which has not existed for a long time. Generally speaking, the *unfair profits extorted by monopolists exist only when the monopolist's price is higher than competitive prices would be* and therefore *monopoly profits are measured by the excess of monopoly price over competitive market prices.*

The following table, showing the trend of wages during the last sixty years, illustrates the remarks quoted from Professor Clark on page 28.

The other tables given in this connection show the trend of prices of certain trust-made commodities during the great trust period of our history.

Has the general fall in prices been caused by combinations or by inventions or both?

To what extent would the great improvement in machine production have been possible under the regime of small producers which was driven out by combinations and trusts?

PURCHASING POWER OF A DAY'S LABOR.

From "Handbook on Currency and Wealth," by George B. Waldron, A. M., statistical editor of "The Voice."

All figures are on percentages with the year 1860 as 100.

Year January.	Relative Purchasing Power of One Day's Labor.	Average Hours of Labor per Day.	Relative Purchasing Power of Ten Hours Labor.	Year January.	Relative Purchasing Power of One Day's Labor.	Average Hours of Labor per Day.	Relative Purchasing Power of Ten Hours Labor.
1840.....	84.4	11.4	74.0	1870.....	115 7	10.5	110.2
1841.....	81.4	11.5	70.8	1871	122.3	10.5	116 5
1842.....	93 3	11 4	81 8	1872.....	126.2	10.5	120.2
1843.....	98 5	11.5	85 7	1873.....	128.8	10.5	122.7
1844.....	97.9	11.6	84 7	1874.....	125 1	10 5	119 1
1845.....	97 2	11 5	84.5	1875.....	122.6	10 3	119.0
1846.....	93.6	11.4	82.1	1876.....	123.5	10 3	119.9
1847.....	95 9	11.5	83 4	1877.....	126 6	10.3	122 9
1848.....	103 8	11.3	91.9	1878	134.7	10 3	130.8
1849.....	108 4	11.2	92.7	1879.....	146 7	10.3	142.4
1850.....	101.9	11.5	88.6	1880.....	136.3	10.3	132.3
1851.....	92.4	11 4	81.1	1881.....	139.0	10 3	135.0
1852.....	93.8	11.2	83 8	1882.....	140 2	10 3	136.1
1853.....	88 8	11.3	78 6	1883.....	149.3	10.3	145 0
1854.....	91.2	11.1	82.2	1884.....	151.2	10.3	146 2
1855.....	89.3	11.1	80.5	1885.....	167.1	10.3	162 2
1856.....	87.3	11 0	79.8	1886.....	166.8	10 2	163.5
1857.....	87 0	10.9	79 8	1887.....	165.7	10.0	165.7
1858.....	86 5	11.0	78.6	1888.....	164.1	10 0	164.1
1859.....	96.9	11.1	87.3	1889.....	165.3	10 0	165.3
1860.....	100 0	11.0	90.9	1890.....	179.5	10 0	179.5
1861.....	107.0	10.9	98 2	1891.....	178.6	10.0	178.6
1862.....	99.6	10.8	92 2	1891 Oct	181.5	10.0	181.5
1863.....	89.9	10 8	83 2	1892 Oct	181.0	10 0	181 0
1864.....	77.9	10.8	72.1				
1865.....	64 0	10.7	59 8				
1866.....	82.9	10.8	76.8				
1867.....	98.6	10.8	91.3				
1868.....	94.8	10.6	89.4				
1869.....	109.9	10.6	103.7				

Make a diagram on cross-section paper showing the rise and fall in wages and length of a day's work

Make three curves, one for each column of statistics.

TABLE OF PRICES AND FREIGHT RATES.

Calendar Year	Prices of Crude Oil per barrel, Steel Rails per ton, and Nails per keg of 100 lbs				Average freight rates per bushel on wheat from Chicago to New York.	
	Crude Oil	Steel Rails	Cut Nails	Wire Nails	By Lake and Canal	By all Rail
					cents.	cents.
1864.....	$7 85	Iron	$7 85		28 36	
1865.....	6 65	Rails	7 08		26.62	
		Used				
1866.....	3 76		6 97		29.61	
1867.....	2 40	$166 00	5 92		22.36	
1868.....	3 57	158 50	5 17		22 79	42.6
1869.....	5 64	132 25	4 87		25 12	35.1
1870.....	3 86	106 75	4 40		17.11	33.3
1871.....	4 42	102 50	4 52		20.24	31.
1872.....	3 68	112 00	5 46		24.47	33.5
1873.....	1 84	120 50	4 90		19.19	33.2
1874.....	1 17	94 25	3 99		14.10	28.7
1875.....	1 33	68 75	3 42		11.43	24.1
1876.....	2 61	59 25	2 98		9 58	16.5
1877.....	2 37	45 50	2 57		11.24	20.3
1878.....	1 17	42 25	2 31		9 15	17.7
1879..... ...	86	48 25	2 69		11 60	17.3
1880.....	95	67 50	3 68		12.27	19.9
1881.....	85	61 13	3 09		8.19	14.4
1882.....	79	48 50	3 47		7.89	14.6
1883.....	1 06	37 75	3 06		8.37	16.5
1884..... ...	84	30 75	2 39		6.31	13.125
1885.....	88½	28 50	2 33		5 87	14.
1886.....	71⅞	34 56	2 27		8 71	16.5
1887.....	62⅔	37 08	2 30	$3 15	8.51	15.74
1888.....	87¼	29 83	2 03	2 55	5 93	14.5
1889.....	94⅛	29 25	2 00	2 49	6.89	15.
1890.....	84⅛	31 75	2 00	2 51	5.85	14.31
1891...	66¼	29 92	1 86	2 05	5.96	15.
1892.....	857 1/16	30 00	1 83	1 70	5.61	14.28
1893.....	66¼	28 12	1 44	1 49	6.33	14.7
1894.....	87⅝	24 00	1 08	1 11	4.44	12.88

Not made in commercial quantities before 1887.

(Continued on Page 43.)

TABLE OF PRICES AND FREIGHT RATES.

(Continued from Page 42.)

Calendar Year	Prices of Crude Oil per barrel, Steel Rails, per ton, and of Cut Nails, per keg of 100 pounds.				Average freight rates per bushel on wheat from Chicago to New York.	
	Crude Oil.	Steel Rails	Cut Nails	Wire Nails.	By Lake and Canal	By all Rail
1895.....	1.36	24.33	1.47	1.69	4.11	12.17
1896.....	1.20¼	28 00	2.32	2.50	5.38	12.
1897.....	.....	18.75	1 56	1.45	4 35	12.32
1898.....	.....	17.62	1.31	1.45	4.42	11.55
1899.....	.....	28 12	2 21	2.57	5 65	11.13
1900.....	.....	32 29	2.48	2.76	4 42	9 98

Adapted from U. S. Statistical Abstracts by Mary O. Stuart, Iowa State Normal School, Class of '91.

Make diagrams on cross-section paper showing, by curves, the rise and fall in prices in oil, rails, nails and freight rates.

If canal rates are so much cheaper than rail-road freights, why are not canals more common? Read the chapters on canals in Ely's *Problems of Today*.

RENT.

Rent is the share of the product which goes to the landlord on account of the productivity of the land.

A's	farm	averages	30	bu.	to the acre.
B's	"	"	29	"	"
C's	"	"	28	"	"
D's	"	"	27	"	"
E's	"	"	26	"	"
F's	"	"	25	"	"

Which is the most fertile of these farms?

Which would you prefer to own?

If you could secure F's farm free of rent and had to pay one bushel per acre for rent on E's farm, which of the two would you take?

If these six farms *vary in size* and *each produces* a total crop of *1000 bushels* which will it pay to cultivate when there is a demand for 4000 bushels?

Which will be the marginal farm?

How much of his product will the owner have to sell to cover cost?

Which will have a surplus after paying the cost of production?

How many bushels can each afford to pay as rent?

By what is the rent measured? Express in product.

Suppose the productivity of all the farms was the same, would any of them produce a surplus above cost?

Could rent be required of any of them?

With what, then does rent originate?

Let us find the measure of rent in money. Using problem 5, page 6 we have the following conditions.

A's product is		277	bu.
B's	"	858	"
C's	"	924	"
D's	"	1001	"
E's	"	1092	"

With a demand for 3017 bu. and a total cost to each producer? of $120.12:

Which farms will supply the demand?

Which farm is producing at the greatest advantage?

Which is the marginal farm?

Which fixes the price?

What will the price be?

What rent in money can each afford to pay?

How much rent can each afford to pay per bushel?

How might you express this in a general statement?

Problem 35. Take the agricultural conditions as given in Problem 4, p. 6, and find the marginal farm and the rent of each farm, both in money and in product. How much rent could be paid on each bushel?

Problem 36. Take the conditions as given in the fifth Problem, p. 6, and find the marginal farm, price, and the rent on each farm both in money and product.

LOCATION OF FARMS.

Fertility is only one element in productivity. A less fertile farm if nearer some great city may be more valuable, more truly productive, than a more fertile farm remote from any market.

Problem 37. Let us suppose the following conditions:

Farms	A	B	C	D	E	F
Fertility	30 bu.	29	28	27	26	25
Cost of transportation per acre	3 bu.	2	1	0	0	0

What is the *real productivity* of each farm expressed in bushels?

If the product of all the farms is needed to supply the the market, what rent can each pay?

Problem 38. Smith's farm yields 60 bushels of corn to the acre; Clark's yields only 40 bushels, but Clark's farm is so near the railroad station that he can deliver ten loads of 35 bushels each day, while Smith being thirty miles out in the country requires two days to deliver a load and return home. The driver's wages are $2.00 and the team counts for $1.50 a day. The cost of *cultivation* on each farm is $20 per acre. Required the real cost of production per bushel on each farm and the rent of each when the *market price* of corn is 62c a bushel.

ECONOMIC RENT AND PRICE.

Remembering now that rent arises out of difference in productivity, and may be caused either by variation in fertility or proximity of a market, we are ready to consider the question whether high prices are caused by large rents. We must always remember that the *rent* of every day conversation is a combination of economic *rent*, due to productivity of soil, and *interest* on the capital invested in permanent improvements on the farm, such as houses, barns, fencing, tiling, etc. Our discussion is restricted to economic rent.

THEOREM V. *Rent may be increased while price remains the same.*

Utilize the element of reduction in transportation by the building of a grain elevator near the most fertile farm, and prove this theorem.

THEOREM VI. *Rent may be increased while price is diminished.*

N. B. Let railroad connections be made with a farm more fertile than any before furnishing this market, and note the probable result on marginal farm, price and rent.

THEOREM VII. *Prices may be increased while rent remains the same.* Could conditions exist that would justify this theorem?

N. B. Consider the effect on all cost, and hence on price, of a scarcity of labor through emigration or the introduction of manufacturing business.

THEOREM VIII. *Prices may increase while rents decrease.* Think of conditions which would enable you to prove this theorem.

URBAN RENTS.

The principle of rents may be applied to city lots through the element of *location.*

QUESTIONS.

1. For which would you pay the larger rent, a business lot remote from the best business part of town or one in the heart of business?
2. If you were in the business of producing machinery which you sold to foreign markets and people in other states, would you be willing to pay higher rent for a

building near the docks and railroads than for one ten blocks or more from these means of transportation?

3. Explain how you would be warranted in such apparent extravagance.
4. Explain how the principle of rent applies to residence lots
5. When a man buys a city lot in the outskirts of town and waits for the rise in value due to growth of the city does he earn the increase in value?
6. To what is the increase due?

THE UNEARNED INCREMENT AND SINGLE TAX.

In 1830 a quarter acre of land at the mouth of the Chicago River could have been bought for $20. There were at that time 50 people living in that immediate vicinity. In 1894 the the population of the city was about 1,500,000, and the same quarter acre of land was worth $1,250,000. [1] This immense increase in value was evidently caused, not by the labor of the owner, but by the conditions attending the *increase of population*. Such an increase of value is commonly called "*the unearned increment*," and it is claimed by Henry George and many others that no man has a right to acquire wealth in this way, that the unearned increment should go to society at large. Indeed the claim is that no man should own land, but that land should belong to society, that is the State, and that every man should pay a rent to the State, based on the economic rent of rural land and on the "*ground rent*," for the unimproved lot in town. This theory is called the Single Tax Theory of Henry George. *Under this plan the marginal land would not be taxed at all.* Prove the following theorems:

1. See tabular statement in Thurston's *Economics and Industrial History* p. 235.

THEOREM IX. *A tax laid on economic rent would not affect prices.*

THEOREM X. *A tax laid on the market value of land does affect prices.*

John Stuart Mill, the President of the English Land Tenure Reform Association, held views somewhat less radical than those of Mr. George, who even went so far as to urge the *confiscation* of property [1] in land, and the idea of nationalization of land was for a time very popular, but the *inadequacy* of a single land tax to supply the needed revenues of the state is now pretty generally conceded, while the *utter injustice* of *confiscating* land property acquired under the sanction of the state is obnoxious to all fair minded people [2]

RENT AND FREE LAND.

In a new country all land is at first practically free. Each new comer selects his home, and occupation is practical possession. Squatters rights are unchallenged. As population increases and the most desirable land is taken up, only the less desirable land is free—land further from business and the market or land markedly less fertile.

The *best of the free land*, that which will only just pay for cultivation, is the marginal land. There are poorer lands that are *free*, varying in productivity down to those which will just enable men to support life. These lands may be called sub-marginal lands. Lands of a still poorer

1. Read George's Progress and Poverty, Chapter II, Book VIII.
2. The principle of Land Nationalization is very clearly dsicussed by Gen. F. A. Walker in Chapter X of his Advanced Political Economy. Henry George's ideas are more briefly discussed in Walker's Elements of Political Economy, Chapter XIX.

grade are free, but unoccupied because they do not furnish a living. They may be called waste lands. The sub-marginal lands are frequently occupied for herding purposes, as was the case with a portion of the Great American Desert before increase of population, irrigation and improved methods of cultivation brought them into the agricultural state. On the other hand, in England, after the Black Death, A. D. 1348-51, when population was so diminished that labor became too expensive to employ on marginal farms and farms giving low rents, it became necessary to resort to sheep raising on these farms, as that industry required fewer laborers to the acre and brought good results for the money expended.[1]

Lands may be classified as follows:

1. Rent Lands.
2. Free.
   - (a) Marginal Lands.
   - (b) Sub-Marginal Lands.
   - (c) Waste Lands.

Wendell Phillips is said to have given the following statement of what rent should be.

"Honest rent is the *surplus* left after the tenant has lived in comfort, material, intellectual, personal, and social comfort."[2]

Criticise this idea of rent from the standpoint of economical rights of man. [3]

1 Industrial History of England. Gibbins. p. 46, also Cheyney's Industrial and Social History of England p 141-142.

2 School Herald for 1881, p. 154.

3 Economic rights are discussed under free competition.

PRESUPPOSITIONS OF THEORY OF RENT.

It is evident that, in order to compare different portions of land as to their productivity, certain conditions must be observed.

1. *Land must be kept at its normal condition of fertility.* Any loss by cultivation must be restored by *fertilization.* In other words, the farms must not be allowed to run down. This is usually provided for in all farm leasing and is simple justice to both parties.
2. *Equal expenditure for labor and capital per acre* is also necessary if we are to make a just comparison of farms.
3. *The point of diminishing returns must have been practically reached* in the plan of cultivation of each farm, else the *apparent fertility* may be increased by an increase of labor or capital on one and will be impossible on the other.
4. *Perfect competition* is understood in rent as in most economic theories. [1]

The following tabular statement of fruitfulness of corn lands in the United States may prove interesting in connection with the subject of Rent:

Washington, Nov. 10. 1902.—The preliminary estimate of the average yield per acre of corn, as published in the monthly report of the statistician of the department of agriculture, is 26 8 bushels, as compared with an average yield of 16.7 bushels in 1901, 25.3 bushels in 1900, and 1899 and a ten year average of 23.4 bushels.

1. Read Walker's Advanced Political Economy p. 196 and Ricardo's Political Economy (Gonner's edition) p. 48 & 26.

The following table shows for all states having 1,000,000 acres or upward in corn, the preliminary estimates of average yield per acre in bushels in 1902, with the final estimates for 1901 and 1900 aud the mean of averages of the last ten years:

	1902	1901	1900	10 yr av'g.
Illinois	38.7	21.4	37.0	31.3
Iowa	32.0	25.0	38.0	30.6
Kansas	30.4	7.8	19.0	20.0
Nebraska	32.0	14.1	26.0	23 0
Missouri	39 0	10.1	28.0	25.4
Texas	8.1	11.6	18.0	18.5
Indiana	38.9	19.8	38.0	30.5
Georgia	9 0	10.0	10.0	10.6
Tennessee	21.0	14.2	20.0	20.7
Kentucky	27.0	15.6	26.0	24.6
Ohio	38.0	21.1	37 0	31.8
Alabama	8.4	10.9	11.0	12.9
North Carolina	14.0	12.0	12.0	12.6
Arkansas	20.9	8.1	19.0	17.3
Mississippi	11.5	10.9	11.0	14.4
Virginia	21.6	22.2	16.0	19.0
South Carolina	10.7	6.9	7.0	9.1
South Dakota	17.5	21.0	27.0	21.3
Oklahoma	25.8	7 3	26.0	. .
Wisconsin	28.2	27 4	40.0	31.2
Pennsylvania	33.8	35.0	25.0	31.7
Minnesota	23.2	26.3	33.0	29.2
Louisiana	12.5	13.7	17.0	16.4
Michigan	26 1	34 5	36.0	30.8
Average	26.8	16.7	25.3	23.4

QUOTATIONS FROM THE GRAIN MARKET.

Let the students show by curves on cross-section paper, the rise and fall in prices of different kinds of grain.

	Opening	WHEAT Highest	Lowest	——Closing—— Oct 27	Oct 25
Oct	.....	.....	.....	71¼	71
Dec	72¼- ½	72⅞	72⅛	72⅜	72½
May	73¾-74	74½	73½	74⅜	74
July	72¼	72⅝	72¼	72⅝	72
		CORN			
Oct	57½	57¾	57½	57¾	57½
Nov	55¾	55⅞	55¾	55⅞	56
Dec	51⅝- ¾	51⅞	51⅛	51⅜s	51¾
May	43⅜- ⅞	43⅞	43½	43⅜s	43⅞
July	43	43⅞	42¾	42⅞	42⅞
		OATS			
*Oct	28⅞	29	28⅞	28⅞	28⅝
†Oct	30¾	30¾	30⅜	30⅜	30⅞
*Dec	28¾	28⅞	28⅝	28⅝	28¾
†Dec	31-31⅛	31⅜	30⅞	31⅛	31¼
May	32⅛ - ¼	32⅜	32	32¼s	32½
July	.....	.....	.....	.....	31½

*Old. †New.

	Opening	WHEAT Highest	Lowest	———Closing—— Oct 28	Oct 27
Oct	.....	.....	.....	71¾	71¼
Dec	72⅜ ⅞	73⅜	72⅝	73¼	72¾
May	74¼ - ⅜	75	74⅛	75s	74⅜
July	72⅝	73	72⅝	73	72⅝
		CORN			
Oct	56½	57	56½	57	57¾
Nov	55⅞	56	55½	55½	55⅞
Dec	51¼ - ⅜	51⅝	50¾	51⅛s	51⅜
May	43½	43⅝	43¼	43⅜	43⅜
July	42⅜ - ⅞	42⅞	42⅝	42⅝	42⅞
		OATS			
*Oct	.....	.....	.....	28⅞	28⅞
†Oct	.....	.....	.....	30½	30⅜
*Dec	28⅝	28¾	28⅜	28¾	28⅝
†Dec	31	31⅛	30¾	30⅞	31⅛
May	32⅛	32¼	32	32⅛	32¼

*Old. †New.

	Opening	Highest	Lowest	Closing Oct 29	Closing Oct 28
WHEAT					
Oct	.....	.....	.....	71¼	71⅜
Dec	73⅛- ⅜	73½	72⅝	72⅞	73¼
May	74⅞-75	75¼	74¼	74⅝	75
July	73½	73⅝	72½	72⅞	73
CORN					
Oct	57	57	55½	55¾	57
Nov	55	55	54¼	54⅝	55½
Dec	50⅞ 51	51⅛	50⅛	50⅛s	51⅛
May	43¼- ⅛	43½	43	43	43⅜
July	42⅝	42⅝	42¼	42¼	42⅝
OATS					
*Oct	28¼	28⅜	28¼	28⅜	28⅞
†Oct	31	31	29⅞	29⅞	30½
*Dec	28¾	28¾	28⅜	28⅜	28⅞
†Dec	30⅞	30⅞	30⅝	30½	30⅞
May	32⅛- ¼	32¼	31¾	31¾	32⅛

	Opening	Highest	Lowest	Closing Oct 30	Closing Oct 29
WHEAT					
Oct	.....	.....	.....	71¼	71¼
Dec	72½- ¾	72⅞	72⅜	72⅞	72⅞
May	74-74¼	74¾	74	74⅜s	74⅜
July	72⅜	72⅝	72⅜	72⅝	72⅝
CORN					
Oct	55½	56	55	55¾	55¾
Nov	53⅞	54⅜	53¾	54⅜	54⅜
Dec	49⅝-50	50¾	49⅝	50¾	50¼
May	42⅝- ⅞	43	42⅝	43	43
July	42-42⅛	42¼	42	42⅛	42¼
OATS					
*Oct	.....	.....	.....	28¼	28⅜
†Oct	29⅞	29⅞	29⅝	29⅝	29⅞
*Dec	.....	.....	.....	28¼	28⅜
†Dec	30⅜	30½	30¼	30½	30½
May	31½- ¾	31¾	31⅝	31⅝	31¾

*Old †New

	Opening	Highest	Lowest	Closing Oct 31	Closing Oct 30
WHEAT					
Oct	71¼	71¼	71⅛	71¼	71¼
Dec	72¾-⅞	73	72⅝	72⅝	72⅞
May	74⅝-¾	74¾	73⅞	74¼s	74⅝s
July	.....	.....	.....	.....	72⅝
CORN					
Oct	55¾	55¾	54¾	55⅝	55¾
Nov	55⅛	55¼	53⅞	54½	54⅜
Dec	50¾-51⅛	51⅜	50¾	51⅛	50¾
May	43-43⅛	43¼	42⅝	42¾	43
July	42¼-⅜	42⅜	42⅛	42⅛	42⅛
OATS					
*Oct	.....	.....	.....	28	28¼
†Oct	29¾	29⅞	29⅝	29⅝	29⅝
*Dec	28¼	28¼	28	28¼	28¼
†Dec	30⅛	30½	30⅛	30¼	30½s
May	31⅝-¾	31¾	31⅜	31⅜	31⅜

	Opening	Highest	Lowest	Closing Nov. 1	Closing Oct. 31
WHEAT					
Nov	70½	70½	70	70½	70⅞
Dec	71⅜-⅞	71⅞	71⅛	71⅜s	72⅛s
May	73-73-⅜	73⅜	72¾	73⅜s	73⅝s
CORN					
Nov	53⅛	53¼	52⅜	52⅝	53¾
Dec	50⅛-½	50½	49⅞	50⅜	50⅝
May	41¾-⅞	42	41⅛	41⅜s	42
July	41-41⅛	41¼	40⅝	41s	41½
OATS					
Nov	.....	.....	.....	29¼	29⅜
*Dec	27¾	27¾	27½	27¾	28⅛
†Dec	29⅝-¾	29¾	29¼	29¾	29⅞
May	31-31⅛	31⅛	30⅝	31s	31⅛

	Opening	Highest	Lowest	Closing Nov 5	Closing Nov 3
WHEAT					
Nov	.....	.....	.....	70½	70½
Dec.	71⅝ ⅞	71⅞	70⅞	71½	71⅝s
May	73⅜-⅝	73⅝	72¾	73½s	73⅜
CORN					
Nov	53	53¼	53	53¼	52⅝
Dec	51-51¾	51⅞	50¾	51⅞	50⅜
May	41⅞-42⅛	42¼s	41½	42	41⅝
July	41¼- ⅜	41⅜	41	41⅛	41
OATS					
Nov	.....	.....	.....	29½	29¼
*Dec	27⅝	27⅞	27⅝	27⅞	27¾
†Dec	29¾- ⅞	29⅞	29½	29¾	29¾
May	31	31⅛	30⅝	31	31
July	30¼	30¼	30¼	31	.....

	Opening	Highest	Lowest	Closing Nov 6	Closing Nov 5
WHEAT					
Nov.	.....	.....	.....	70¼	70½
Dec	71⅜- ½	71⅝	71	71¼	71½
May	73¼- ½	73⅝	72⅞	73¼	73½
CORN					
Nov	53½	53⅞	52¾	52¾	53¼
Dec	51½- ¼	51½	50¾	50⅞s	51⅜
May	41¾- ⅞	42⅜	41¾	41⅛s	42
July	41½	41⅝	41⅜	41⅜	41⅛
OATS					
Nov	.....	.....	.....	29	29⅛
*Dec	28	28⅛	28	28	27⅞
†Dec	29¼ ⅞	30	29⅝b	29¾	29¾
May	30⅞	31⅛	30⅞	31	31
July	.....	.....	.....	.....	31

VOCABULARY OF ECONOMICS.

Absolute Utility is utility in general, without regard to the quantity of the comodity, and it is measured by the importance of the want which is satisfied. See p. 7, Part II.

Advantages of Division of Labor are many; the most prominent are: (1) The development of dexterity; (2) Saving of time in apprenticeship; (3) Saving of time in changing work; (4) Encouragement of inventions; (5) Adaptation of labor to individual fitness.

Agents of Production are land, labor and capital. Land and labor are the primary, essential agents; capital is the secondary agent. These agents are sometimes called *factors* of production.

THE AGENTS OF PRODUCTION.

	AGENT		SHARERS	PORTION
Primary or Essential	1 Land		Landlord	Rent
	2 Labor	Labor	Wage Earner	Wages
		Business Management	Proprietor	Profit
		Government Protection	Society	Taxes
Sec'nd'ry	3 Capital		Capitalist	Interest

Autonomous or Independent Producers are those undertakers who do not hire help; they do not work for wages, but furnish their own capital and sell their product hoping to make a profit.

Bimetallism is a theory of money whereby both silver and gold are the basis of the system, and coins of full legal tender are made in each metal at a fixed ratio of value. —See Walker's Elements of Economics, pp. 117-121.

Capital is wealth used for the production of more wealth. It is production goods. See fixed capital and circulating capital.

Capital—Kinds of. There are two kinds of capital, viz: Fixed and circulating capital, q. v.

Capital—Law of. Capital can be accumulated only by saving. This law has been disputed and the statement made that capital is accumulated by surplus production, but if the surplus is not saved, abstained from, there will be no accumulation.

Captains of Industry are the men who have shown themselves great organizers and managers of business enterprises. They may be and usually are independent producers, but they also, frequently, give their services to a great corporation, in which they are usually interested, and receive a salary.

"*Competition* is the (free) action of individual self-interest." Palgrave's Dictionary of Pol. Economy.
Competition is the effort of *individuals* to *produce and exchange goods* on terms most *advantageous to themselves* (See Free Competition.)

Consumers are those who use goods, and they are classified as Productive. (1) Giving material service; (2) Giving personal service. Unproductive or dependent. (1) Defectives; (2) Parasites. (See definitions of each of these terms.)

Circulating Capital is capital which is intended to be used but once, and in the using is either destroyed or changed into some other form of capital, e. g. fuel, seed-corn, yarn.

Civilization is the process of discovering new wants and means to satisfy them. "Material civilization consists largely in wanting many things and learning how to use them."—*Ely's Outlines, p. 3.* Moral civilization consists in perfecting the duties and enlarging the circle of brotherhood.—Id. p. 5.

Consumption is the use of wealth; it is the destruction of utilities. The use of an automobile for a pleasure trip is an act of consumption. See final and productive consumption.

Consumption Goods are those goods which are used for the enjoyment we have in the using; e. g., a pleasure boat, a boy's bicycle, a pair of skates.

Credit is protracted exchange; it is a transfer of goods for a promised equivalent.

Currency is the proper term for money in the popular use of the word. See § 17, Part I.

Defectives are unproductive consumers, who are physically or mentally unable to earn their own living; e. g., infants, insane, the very aged, etc.

Deferred Payments are those which are not required to be paid at the time of the exchange, but are postponed till some future time.

Demonitization is the discontinuanee by government of the use of a coin and its official withdrawal from circulation.

Dependents are members of society who secure a living without production, by enjoying the fruits of other people's labor and giving no equivalent in exchange. Dependents are divided into defectives and parasites, q.v.

Difficulties of Barter are three: (1) Securing the double coincidence of wants and possessions; (2) Providing for change, (3) Finding a common denominator or measure of value.

Diminishing Returns, the law of—In the cultivation of any tract of land a point is sure to be reached when the proportional returns of labor and capital begin to fall off. For further treatment and ways of postponing this point, read Walker's Elements, p. 55.

Disadvantages of Division of Labor are numerous; among them are: (1) It makes men inefficient in other kinds of work than the one to which they are accustomed, and unable to secure work if thrown out of their own occupation; (2) Under division of labor business becomes complicated, liable to great derangement in case of strikes: (3) Division of labor has often resulted in giving to women and children work which was formerly done by men at full pay. Of course the wages of women and children are less and there is a distinct loss to the laboring class.

Distribution is the division of wealth among those who had a share in producing it.

Division of Labor is a system by which any industry is separated into parts or processes, which are assigned to different workmen or groups of workmen.

Division of Occupations is the specializing of work by which men devote themselves to one phase of production, as work in leather, in wood or in stone, and exchange their products for money or goods of all sorts needed in their standard of living. Division of occupations results in the development of carpenters, masons, merchants, etc.

Economic Goods are external goods which, because of their scarcity, command goods in exchange.

Economic History is the story of the development of man in his want-satisfying activities, the story of man's discovery of new wants and how to satisfy them.

Ecocomic History—stages of: (1) Hunting and fishing stage, illustrated by the life of the American Indians; (2) The herding, pastoral stage, illustrated by the life of Abraham; Isaac and Jacob and much of the oriental life; (3) The agricultural stage, illustrated by the farm life of the majority of the English people before the fourteenth century. (See Ashley's Economic History, Vol. I, p, 5); (4) The manufacture and commerce stage, including the home, gild and domestic periods of English life from 1450-1769; (5) The industrial or factory period, characterized by the application of steam as a motive power and the massing of employees in great mills and factories. It began about 1769; (6) The trust stage, characterized by the combination of small concerns into great syndicates, and the attempt to establish vast monopolies. The industrial life in the United States during the last quarter century, illustrates this stage.

Economic Money must have a market value, as a commodity, equal to its face value as coin, and it must perform all the functions of money. See § 19, Part I.

Economic Rights are those which belong to a man in connection with satisfying his material wants, or getting a living. These rights are limited by the rights of other men and the good of society.

Economic Wants are those whose gratification commands a a price. "Economic wants are those which are satisfied by things which are objects of exchange."—*Ely's Outlines, p. 120.*

Entrepreneurs are men who undertake to supply the needs of the public and sell their products with the hope of making a profit. They furnish the capital and may or may not hire laborers. They are also called undertakers and proprietors.

Efficiency of Labor varies with the individual, and for the following reasons: (1) Heredity; (2) Food; (3) Sanitary surroundings; (4) Intelligence; (5) Hopefulness.

Effective (Final or Marginal) *utility* is utility with special regard to the quantity of the commodity and the present needs of the individual. It is measured by the lowest want satisfied by the available goods. See pp. 7-9, Part II.

Exchange is the double transfer of goods; it is the transfer of goods for a consideration; it is trade.

External Goods (objective goods) comprise all of man's environment that has utility; e. g., houses, cattle, air, sunlight, chemical affinity.

Final Consumption is the use of goods for the satisfaction we find in using them; e. g. the eating of fruit, driving for pleasure.

Fixed Capital is that kind of capital which is intended to be used more than once, as, machinery, railroad trains, and cattle.

Forms of Capital are subsistence, tools, and materials. The Austrian school deny that subsistence is capital, claiming that it is not production goods, but consumption goods.

Free Competition is such competition as is not subjected to any unfair restriction or interference. It is sometimes called perfect competition. See Obstacles to Free Competition.

Free Goods are external goods which on account of thier abundance command no price.

Functions of Money are: (1) Facilitating exchange; (2) Serving as a measure of values; (3) Affording a standard for deferred payments; (4) Acting as a storage of values.

Goods comprise all things that have utility.

Goods (Outline of);

1. Internal
2. Economic.
   (1) Free.
   (2) External.
      a. Potential Wealth.
      b. Actual Wealth.
      c. Personal Service.

Government Interference is restraint put upon competition by the state. Unfair interference is such as prevents men from enjoying all the economic rights to which they are entitled.

Gresham's Law—Bad money drives good money out of circulation, but good money cannot drive out bad money.

History of Economics is the story of the development of the science of economics, and it includes a sketch of the theories of the various schools and leading writers on economics.

Increasing Returns—The law of: In manufacturing, the increase of productiveness through more efficient machinery suggests an increasing return in proportion to the increase of capital. This law is however open to dispute.

Interest is sometimes defined as the price which is paid for the use of capital. Many prominent writers of to-day define interest as the excess of the value of present goods over that of future goods. Interest is the capitalist's share of the product.

Interest—Law of. Interest is determined by the productivity of capital in the hands of the marginal investor. See pp. 17-20, Part II.

Interference—See Government interference.

Internal Goods (Subjective goods) comprise all desirable parts, faculties, conditions, and qualities of human beings.

Labor is human effort voluntarity put forth for the production of goods The primitive form of labor was the appropriation of natural goods, i. e. the act of appropriation.—Clark's Philosophy of Wealth, p. 10.

Laborers (Classified): Wage earners; Undertakers (or Entrepreneurs); Independent (Autonomous) producers; Employers.

Land comprises all natural resources which can be used in production and includes materials and forces.

LaSalle's Iron Law—Wages tend to fall to the level of that standard of living which just provides the necessities of life.—See p. 25, Part II

Legal Tender is that which the law compels a creditor to receive in payment of debt.—§ 18, Part I.

Material Services comprise all vendible utilities resulting from labor and embodied in matter.

Money is a medium of exchange and a measure of values. For more elaborate definition see § 13, Part I.

Money—Conceptions of. (1) Popular; (2) Legal; (3) Economic. Read §§ 16-19, Part I.

Monopolist (A monopoly?) is a person or combination of persons (public or private) which has and uses the power of control of the market with regard to any commodity.

Monopoly is the exclusive control of the market with regard to any commodity.

Monopoly Price—Law of. The monopolist is forced by self-interest to sell at that price whose excess above cost, multiplied by the demand, gives the largest profit. See pp. 37-39, Part II.

Monopoly Profits are measured by the excess of monopoly price over competitive market price. See p. 40, Part II.

Malthusian Doctrine—Dr. Malthus, an English clergyman, about the close of the XVIII Century wrote a book claiming that population increased in geometric ratio while food increased only in arithmetic ratio. Therefore it was only a question of time when the world would be unable to sustain its population and men must starve.

Necessary Profits, sometimes called wages of superintendence, are the minimum of profits that an entrepreneur will consider as an inducement to continue independent production. They are considered a part of the cost production.

Nominal Wages are wages expressed in money and vary with the purchasing power of money.

Normal Value is determined by the cost of production of that part of the needed supply produced at the greatest disadvantage. See pages 3 and 4, Part II.

Obstacles to Perfect Competition. (1) Unjust government interference; (2) Combinations of employers; (3) Combinations of employees; (4) Timidity; (5) Ignorance; (5) Custom; (7) Sentiment.

Occupations are ways of getting a living. Productive occupations are those in which men produce the goods they enjoy, or their equivalents which they exchange for those they wish to enjoy. Unproductive occupations are those in which men do not produce the equivalent of what they enjoy, but secure part or all of their utilities at the expense of others.

Occupations are also classified as: (1) Extraction, (2) Transportation, (3) Transformation, (4) Transfer or Trade, and (5) Personal Service.

Parasites are unproductive consumers who are able to earn their own living, but prefer to secure goods through the labor of others without giving an equivalent. e. g. theives, gamblers, tramps.

Personal Services comprise all vendible but apparently immaterial utilities resulting from labor.

Personal Service, considered as an occupation, is the rendering of those utilities which are apparently immaterial and seem to be embodied in the purchaser, e. g. the occupation of a teacher, singer, barber, etc.

Potential Utility is the unrealized but possible utility existing in things which are not wanted but liable to come into demand by a change in the attitude of consumers.

Potential Wealth comprises all unappropriated economic goods. Most objects in nature are potential wealth. See Smart in Preface to *Positive Theory of Capital.*

Principle touching the relation of fixed and circulating capital. The safety and prosperity of commerce demand that too much existing wealth be not turned into fixed capital, lest there be not sufficient circulating capital to give employment to the fixed capital. A violation of this principle frequently results in financial crises.

Production is the development of utility.

Production goods are goods used to aid directly in the production of more goods.

Productive Consumption is the use of goods to produce more good: e. g. the use of a horse and wagon to deliver groceries,—of tools to build a house.

Profits is that part of the product which goes to the undertaker (entrepreneur) on account of his business ability. Profits is the undertaker's share of the product.

Profits—Law of. Profits are determined by the excess of any undertaker's productivity over that of the marginal undertaker. See Necessary Profits.

Pure Profits are measured by the excess of market price over cost, under conditions of free competition.

Real Wages are wages reckoned in the commodities to be bought with wages. See p. 28, Part II.

Rent is that part of the product which goes to the landlord, on account of the productiveness of the soil. It has been defined as what is paid for the use of the soil. It may also be defined as the landlord's share of the product.

Rent—Law of. Rent is determined by the excess of productivity of any land over that of the marginal land. See p. 44, Part II.

Representative Wealth is proof, sign, or evidence of ownership in real wealth—e. g. deeds, mortgages, promissory notes, paper money, etc. Strictly speaking it is hardly to be considered as wealth, but simply as representative of wealth. See *Ely's Outlines p. 106.*

Services are utilities resulting from labor. Material services are utilities embodied in material form, and Personal Services are vendible but apparently immaterial utilities resulting from labor.

Single Tax—Henry George's plan "to obtain all public revenue, national and local, by taking, as nearly as may be all the rental value of natural opportunities, without regard to improvements." Palgraves Dictionary of Political Economy. A plan to secure all the public revenue by seizing all the economic rent of farm and urban land.

Socialism is a plan of industrial and political organization, by which all capital goods are owned and managed by society through government.

Standard of Living is the minimum, in number and character, of the wants which a man insists on having satisfied. Mr. Ely says "The number and character of the wants which a man considers more important than marriage and family constitutes his standard of living." *Outlines of Economics, p. 181.*

Tabular Standard for Deferred Payments is a schedule of prices of all leading commodities recorded from day to day and affording a criterion of the purchasing power of money, and therefore a just basis for the settlement of deferred payments. See p. 11, Part I.

Transfer or Trade is the business of buying and selling goods, e. g. the grocery business, the clothing business, etc.

Transformation is changing the form or arrangement of goods in such a way as to add to their utility or value, e. g. all forms of manufacture, sculpture, painting.

Transportation is changing the location of goods in such a way as to give them additional utility or value, e. g. rail-roading, the express or dray business.

Unearned Increment is that increase in the value of anything subject to a natural monopoly which is due, not to the expenditure of labor or skill by the proprietor, but to the general progress of society resulting in an increased demand for that thing.

L. of C.

Utility is the power to satisfy a human want. It is a relation between the thing and man, and varies with the wants of man and the nature of things.

Undertakers—See Entrepreneurs.

Value is power in exchange; it is purchasing power. More technically it may be defined as the measure of effective utility. Value is determined (Austrian View) by the effective utility to the marginal consumer or purchaser. See pp. 9 and 10, Part II.

Wages is that part of the product which goes to the laborer. It is the laborer's share of the product. Wages (strictly speaking) is the fixed amount guaranteed to the laborer by the employer in return for services performed.

Wages—Law of. (English Standpoint). 1. Wages are determined by the standard of living of the marginal laborers. See p. 26, Part II. 2. (Austrian Standpoint). Wages are determined by the productivity of labor in the hands of the marginal employer. See pp. 22-23, Part II.

Wages of Superintendence—See Necessary profits.

Wage Earners are laborers who are employed at definite wages or salaries. They have no capital invested in the business, except occasionally certain simple tools which they use in their work, e. g. the laborer's shovel and pick.

Wage Fund Theory—A certain portion of capital is set aside for the payment of wages. The average wage is found by dividing this wage fund by the number of laborers. Wages can be increased only by decreasing the number of laborers. See p. 27, Part II.

Wants of Man are classified from the standpoint of their importance, as: wants calling for (1) Necessities, (2) Comforts, (3) Luxuries. From the standpoint of their origin wants are classified as, Physical, Intellectual, Moral, Spiritual, Social, and Aesthetic.

Wealth comprises all material, economic goods, which have been appropriated by man.

Wealth is Divided According to its Use into consumption goods and production goods. q. v.

STUDIES AND EXERCISES IN ECONOMICS.

N. B.—The following outline presents a plan of study by lectures, conversation, and reference books. The *Vocabulary of Economics*, (Part II, pp. 57-67) will be found helpful in this connection. The author hopes, in the near future, to offer another pamphlet based on this outline, and covering the topics not discussed in this little book.

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6. Fifty ways classified as getting or making a living.
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